



610.5

B53

35



Library
of the
Academy of Medicine,
Toronto.

3221

Presented by

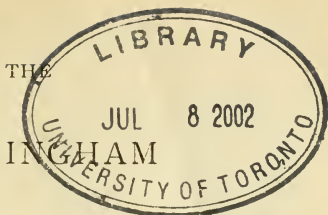
W. H. B. Atkins, Esq. M.D.
1916





Digitized by the Internet Archive
in 2008 with funding from
Microsoft Corporation

THE
BIRMINGHAM



MEDICAL REVIEW:

A MONTHLY JOURNAL
OF
THE MEDICAL SCIENCES.

EDITED BY
JAS. W. RUSSELL, M.D., CANTAB., M.R.C.P.,
AND
O. J. KAUFFMANN, M.D., LOND., M.R.C.P.

VOL. XXXV.
JANUARY TO JUNE.

LONDON:
J. & A. CHURCHILL, 11, NEW BURLINGTON STREET, W.
BIRMINGHAM:
HALL AND ENGLISH, 71, HIGH STREET,
1894.

CONTENTS.

	PAGE		PAGE
A—Abortion, Threatened	171	Demography	253
Adenoma Sebaceum	244	Diarrhœa, Treatment of	172
Acute Nephritis	366	Dickinson (Dr. W. H.) Retirement of ...	190
Albuminuria, Treatment of	367	Diet in Graves' Disease	103
" Intermittent	370	Dislocation, Cervical	300
Alcohol, Nutritive Value of	39	" of Maxilla	301
Alcoholism, Chronic	103	" of Patella	298
Amœbæ in the Urine	375	Dresden Lying-in Hospital	168
Anæsthetics	117, 285	Dyspepsia in Women	193, 257
Aneurism, Cases of	181, 247		
Angioma of Uterus	237	E—Edwards, Hall, L.R.C.P., 149.	
Ankle, Excision of	116	Ear, Diseases of	303
Antiseptics in Phthisis	274, 321	Eclampsia, Puerperal	167
" in Typhoid Fever	134	Eczema, Treatment of	129
Aphonia, Hysterical	104	Empyema, Surgical Treatment of	33
Appendicitis	51, 65	Endocarditis, Extensive	177
Arsenic hypodermically	172	Enteric Fever, Treatment of	173
Axilla, Hæmatoma of	232	Epilepsy, Nitro-Glycerine in	101, 173
Axillary Artery, Wound of	115	Eucalyptus Inunction	172
		" Oil of, in Phthisis	326
B—Bacteriology of Cholera	106	Exalgin as an Anodyne	172
Basilar Artery, Thrombosis of ..	161	Excision of Ankle	116
Benzole in Influenza	171	" of Wrist	45, 47
β-Hydroxybutyric Acid	44	Exudations and Transudations	43
Blood, Chemistry of	41, 42		
Brain, Pyogenic Diseases of	184	F—Foxwell, Arthur, M.A., M.D.,	
Bright's Disease, A Form of Chronic...	366	F.R.C.P., 274, 321.	
Bronchocele, Treatment of	176	Fat, Origin of, from Proteid	42
C—Carter, Alfred H., M.D., F.R.C.P.,		Femur, Periostitis of	179
129—Collier, Wm., M.D., F.R.C.P.,		Fibrosis of Lung	52, 245
156—Creswell, W. G., M.D., 234.		Floating Kidney in the Female	372
Cæcum, Dilated	386	Fracture of Patella	299
Calculi	49, 121, 175, 176, 183		
" in a Horse	180	G—Gall Stones	175
Cancer	57	Gangrene of Hand	46
" of Pancreas	48	Gastric Ulcer	49, 93
Carbonic Acid in Diarrhœa	172	Genital Organs, Tuberculosis of	240
Carbonic Acid Gas, Poisoning by ...	310	Gestation, Ectopic	235
Caries, Vertebral	249	Glycogen in Blood	41
Carnis Suppositories	255	Goitre, Exophthalmic	173, 361
Cephalotribe, Extraction of Fœtal		" Parenchymatous	248
Head by	114	Gonorrhœa in the Female	239
Cerebellar Hæmorrhage	157	Graves' Disease	102, 103
Cerebral Injury by Contre-Coup ...	26	Guaiacal in Enteric Fever	173
Cervical Dislocation	300	Gynæcology	61, 62, 235
" Incisions in Midwifery	166		
Chemistry, Physiological and Patho-		H—Hæmatoma of Axilla	232
logical	39	Hæmatoporphyria	44
Children, Diseases of	251	Hæmorrhage, Cerebellar	157, 180
Chloral Hydrate, Poisoning by	174	" Intra-Cerebral	103
Chlorate of Potash in Threatened		" Renal	156
Abortion	171	Hand, Gangrene of	46
Chlorobrom in Sea-sickness	173	Health, Public	62, 188, 253
Chloroform, Experiments on	174	Heart, Reduplication of First Sound of	79
Chlorophyll excreted through skin of		Hemiplegia, Unusual Case of	295
Horse	45	Hernia, Strangulated	177
Chlorosis, Treatment of	170	" Umbilical, Operation for	37
Cholera, Bacteriology of	106	Herpes Facialis	46
Chorea, Two Cases of Hereditary ...	31	Hip-Joint, Angular Deformities at ...	301
Chromatic Dial	191	Horse, Calculi in	180
Chromic Acid in Urine Testing	42, 374	" Dandruff of	45
Congress, International Medical 54, 125,	377	Humerus, Resection of Head of	302
" " of Hygiene and		Hunter, William and John	312
Demography	253	Hydrochloric Acid, Estimation of	39
Conservative Operations on Women...	241	Hydrofluoric Acid as an Antiseptic ...	321
Contre-Coup	26	Hydrogen, Poisoning by Sulphuretted	39
Cranioectomy in Idiots	103	Hygiene, Congress of	253
Crompton. (D. W.) Obituary Notice of	316	Hyoscine Hydrobromate	173
Cyst, Dermoid	183		
" Ovarian	182	Idiots, Craniectomy in	103
" of Thyroid	309	Infectious Diseases	188
" Peritoneal Hæmorrhagic	110	Influenza, Treatment of	170
		Ingleby Lectures	193, 257
D—Deanesly, E., M.D., B.Sc., 93.		Intestines, Diseases of	41, 245, 308
Deciduoma Malignum	236	Intubation and Tracheotomy	304
Deformities at Hip-Joint	301	Intussusception, Double	182
" Treatment of	309		

	PAGE
K—Kauffmann, O. J., M.D., M.R.C.P., 79.	
Kidney, Disseminated Fibrosis of ...	367
" Floating, in the Female ...	372
" Moveable ...	372
" Pyonephrosis of ...	373
Kidneys, Cystic Degeneration of ...	156
L—Lloyd, Jordan, F.R.C.S., M.A., 65.	
Lactic Acid in Blood and Urine ...	41
Laryngeal Cartilage, Necrosis of ...	179
Larynx, Malignant Disease of ...	303
" Tuberculous of ...	305
Leucocythæmia, Pathology of ...	14
Lung, Fibrosis of ...	52
M—Marsh, F., F.R.C.S., 91—Montgomery, John, M.B., 142.	
Malformations, Congenital ...	311
Maxilla, Dislocation of ...	301
Measles, Treatment of ...	172
Medicine, Practice of ...	251
Menstruation, Painful ...	312, 353
Mental Disorder in Nervous Diseases ...	208
" and Pelvic Disease ...	242
Milk, Condensed ...	126
Moveable Kidney ...	372
Myoma of Urethra ...	238
" of Uterus ...	308
Myxædema ...	123
N—Nason, E. N., B.A., M.B., 134, 220, 291.	
Nervous Diseases ...	101, 208
Neuritis, Optic ...	229
" Sciatic ...	124
New Inventions, Drugs, etc. ...	63, 126, 191
Nitro-glycerine in Epilepsy ...	254, 319, 379
Nose, Diseases of ...	101, 173
O—Obstetrics ...	162, 246, 252
Esophagus, Malignant Stricture of ...	112
Oil of Eucalyptus in Phthisis ...	326
Omentum, Removal of ...	247
Orchidopexy ...	38
Orchitis, Metastatic ...	234
Orthopædics ...	309
ORIGINAL COMMUNICATIONS—	
Pneumonia, By Robert M. Simon, M.D., M.R.C.P. ...	1
Some Points in the Pathology of Leucocythæmia. By Douglas Stanley, M.B. ...	14
Abstract of Theory of Mechanism of Cerebral Injury by Contre-Coup. By F. J. Allen, M.A., M.B. ...	26
Appendicitis and Perityphlitis. By Jordan Lloyd, F.R.C.S., M.S. ...	65
Reduplication of the First Sound of the Heart : a Clinical Study. By O. J. Kauffmann, M.D., M.R.C.P. ...	79
Clinical Lecture on a Case of Eczema and its Treatment. By Alfred H. Carter, M.D., F.R.C.P. ...	129
On the Use of Antiseptics in the Treatment of Typhoid Fever. By E. N. Nason, B.A., M.B. ...	134
Acute Inversion of the Uterus. By John Montgomery, M.B. ...	142
Medical Photography. By Hall Edwards, L.R.C.P. ...	149
The Ingleby Lectures, 1894.—On the Common Forms of Dyspepsia in Women. By Robert Saundby, M.D., F.R.C.P. ...	193, 257
Mental Disorder as a Symptom in Diseases of the Nervous System. By J. Pietersen, L.R.C.P., etc. ...	208
The Antiseptic Treatment of Tubercular Phthisis. By Arthur Foxwell, M.A., M.D., F.R.C.P. ...	274, 321

	PAGE
Note on Anæsthetics. By Lawson Tait, F.R.C.S. ...	285
On some of the Clinical Aspects of the Later Stages of Gout, Rheumatism, & Rheumatoid Arthritis. By T. Sydney Short, M.D. ...	337
Painful Menstruation. By Christopher Martin, M.B., F.R.C.S. ...	353
Os Uteri, Mechanical Dilatation of ...	165
Osteo-mylitis ...	179, 231
Otitis Media ...	91
Otology ...	251
Ovum, Transmission of ...	235
P—Perry, S. H., M.B., 161, 293—Pietersen, J., L.R.C.P., M.R.C.S., 208.	
Palate, Syphilis of ...	243
Pancreas, Cancer of ...	48
Paræsthetic Neurosis ...	105
Paralysis, Brachial ...	105
" Facial ...	307
Parkinsonian Tremor ...	102
Parotiditis ...	234
Patella, Dislocation of ...	298
" Fracture of ...	299
Pelvic Disease and Psychical Disturbances ...	242
Perineal Incisions in Midwifery ...	166
Periostitis of Femur ...	179
PERISCOPE—	
Surgery. By William F. Haslam, F.R.C.S. ...	33, 298
Physiological and Pathological Chemistry. By C. A. MacMunn, M.A., M.D., F.C.S. ...	39
Nervous Diseases. By C. W. Suckling, M.D. ...	101
The Bacteriology of Cholera ...	106
Obstetrics. By Fred Edge, F.R.C.S. ...	162
Therapeutics. By T. Sydney Short, M.D. ...	170
Gynæcology. By Thomas Wilson, M.D., B.S., F.R.C.S. ...	235
Diseases of the Throat, Nose, and Ear. By F. Marsh, F.R.C.S. ...	303
Urinary and Renal Diseases. By Robert Saundby, M.D., F.R.C.P. ...	366
Perityphlitis ...	65
Phosphorus, Reactions of ...	40
Photography, Medical ...	149
Phthisis. Antiseptic Treatment of ...	274, 321
Pneumonia ...	1
Poisoning, Aniline ...	174
" by Carbonic Acid Gas ...	310
" by Chloral Hydrate ...	174
" by Strychnine ...	293
" by Tartar Emetic ...	291
Porro's Operation, Uterus removed by ...	115
Powder Insufflator ...	319
Proteid Reactions ...	44
Ptomaines ...	44
Putrefaction in Intestines ...	41
Pyonephrosis of Kidney ...	373
Pyosalpinx ...	248
Pyrexia, Two Cases of ...	27
R—Rankin, Guthrie, M.D., 361—Ratcliffe, J. R., M.B., 157—Russell, James W., M.D., M.R.C.P., 31, 295.	
Reduplication of First Sound of Heart ...	79
Renal Calculus ...	183
" Hæmorrhage ...	156
REPORTS OF CASES—	
Two Cases of Pyrexia. By T. Sydney Short, M.D. ...	27
Two Cases of Hereditary Chorea, occurring in Twins. By James W. Russell, M.D., M.R.C.P. ...	31

	PAGE
Chronic Suppurative Otitis Media ; Aneurism of Internal Carotid Artery ; Ligature of Common Carotid Artery. By F. Marsh, F.R.C.S.	91
Three Cases of Perforation of Gastric Ulcer, with Remarks on its Operative Treatment. By E. Deanesly, M.D., B.Sc.	93
An Unusual Cause of Renal Hæmorrhage. General Cystic Degeneration of Kidneys. By Wm. Collier, M.D., F.R.C.P.	156
Cerebellar Hæmorrhage. By J. R. Ratcliffe, M.B.	157
A Case of Thrombosis of the Basilar Artery. By S. H. Perry, M.B.	161
Cases occurring in General Practice. By E. N. Nason, B.A., M.B.	229, 291
Parotiditis with Metastatic Orchitis. By W. G. Creswell, M.D.	234
A Case of Strychnine Poisoning followed by Acute Nephritis and Ascending Motor Paralysis. By S. H. Perry, M.B.	293
An Unusual Case of Hemiplegia. By James W. Russell, M.D., M.R.C.P.	295
An Interesting Case of Exophthalmic Goitre. By Guthrie Rankin, M.D.	361
REPORTS OF SOCIETIES—	
British Medical Association. Bir- mingham and Midland Counties Branch.	45, 110, 175, 243
Pathological and Clinical Section ...	177
Midland Medical Society ...	50, 180, 246, 309, 375
Kidderminster Medical Society ...	249
Resection of Head of Humerus ...	302
Rest in Chlorosis ...	170
REVIEWS OF BOOKS—	
Clarke, Cancer, Sarcoma, and other Morbid Growths ...	57
Cotterell, Syphilis : its Treatment ...	60
Donald, Introduction to Midwifery ...	252
Duckworth, Women: their probable Place and Prospects in the Twen- tieth Century ...	250
Eccles, Sciatica: Clinical Observa- tions ...	59
Hewett, Anæsthetics and their Ad- ministration ...	117
MacCaw, Diagnosis and Treatment of Diseases of Children (medical) ...	251
Macewen, Pyogenic Infective Dis- eases of the Brain and Spinal Cord ...	184
Martin, Essentials of Minor Surgery ...	124
Mather, Two Great Scotsmen: the Brothers William and John Hunter ...	312
Morris, Essentials of Practice of Medicine ...	251
Oliver, Manual of the Diseases pecu- liar to Women ...	61
Parkes, Infectious Diseases ...	188
Senn, Syllabus of Lectures on the Practice of Surgery ...	189
Simpson, Sciatic Neuritis: its Pa- thology and Treatment ...	124
Slagg, Sanitary Work in the Smaller Towns and Villages ...	62
Stewart, Aids to Otology ...	251
Sutton, Tumours, Innocent and Ma- lignant ...	122
Wilson, Myxœdema; and the Effects of Climate on the Disease ...	123
Catalogue of the United States Army Library ...	125
Introduction to the Catalogue of a Collection of Calculi of the Bladder ...	121

	PAGE
The Students' Hand-book of Gynæ- cology ...	62
Rhinitis, Atrophic ...	306
Rubidium Iodide ...	171
Rupture of Mucous Membrane of Stomach ...	245
S—Saundby, Robert, M.D., F.R.C.P. 193, 257—Short, T. Sydney, M.D., 27—Simon, Robert M., M.D., M.R.C.P., 1—Stanley, Douglas, M.B., 14.	
Sarcoma ...	53, 57
Sciatica ...	59, 102
Sea-Sickness, Treatment of ...	173
Septicæmia ...	162, 164, 231
Skin Flaps, Transplantation of ...	35
Spleen, Removal of ...	180
Splint for Excision of Ankle ...	116
Stomach, Estimation of Hydrochloric Acid in ...	39
Stomach, Rupture of Mucous Mem- brane of ...	245
Stricture of (Esophagus, Malignant ...	112
„ Urethral, in Women ...	238
Strychnine Poisoning, Case of ...	293
Sulphonal and Hæmato-porphyrinuria ...	374
Sulphur for Phthisis Pulmonum ...	331
Sulphuretted Hydrogen a destroyer of Bacillus ...	334
Surgery, ...	33, 189, 298
„ Minor ...	124
Symphiotomy ...	163
Syphilis ...	60
„ Inherited ...	307
„ of Soft Palate ...	243
T—Tait, Lawson, F.R.C.S., 285.	
Tabloids of Drugs ...	63, 126, 191, 319
Tachycardia and Graves' Disease ...	102
Talipes ...	47
Tartar Emetic, Poisoning by ...	291
Testicular Liquid ...	101
Therapeutics ...	170
Thiosinamin ...	305
Throat, Diseases of ...	393
Thrombosis of Basilar Artery ...	161
Thyroid, Cyst of ...	309
Thyroidectomy ...	176, 248
Tibia, Rare Injury of ...	116
Tracheotomy and Intubation ...	304
Tremor, Parkinsonian ...	102
Trephining for Meningeal Hæmorrhage ...	180
Tuberculosis, Laryngeal ...	305
„ of Female Genital Organs ...	240
„ Surgical ...	33
Tumour, Mammary ...	308
„ of Cervical Vertebrae ...	248
„ Papillomatous ...	114
Tumours, Innocent and Malignant ...	122
Typhoid Fever, Antiseptics in ...	134
U—Ulcer, Gastric ...	49, 93
„ of Colon ...	246, 308
Urea, Estimation of ...	42, 45
Urethra, Myoma of ...	238
„ Stricture of ...	238
Uric Acid, Estimation of ...	43
Urine ...	374
„ Amebæ in ...	375
„ Chemistry of ...	42, 43
„ Suppression of ...	371, 373
Urobilin ...	44
Uterus, Angioma of ...	237
„ Inversion of ...	142, 291
„ Removal of ...	115, 181
„ Retrodeviations of ...	237
V—Ventrofixation ...	237
Women, Dyspepsia in ...	193, 257
„ Gonorrhœa in ...	239
„ in the Twentieth Century ...	250
„ Urethral Stricture in ...	238
Wrist, Excision of ...	45, 47

THE
BIRMINGHAM MEDICAL REVIEW.
JANUARY, 1894.

ORIGINAL COMMUNICATIONS.

PNEUMONIA.*

BY ROBERT M. SIMON, M.D., M.R.C.P.
PHYSICIAN TO THE BIRMINGHAM GENERAL HOSPITAL.

It requires some courage—I had almost said audacity—to invite this meeting to devote an afternoon to discussing a paper on a subject so well understood as the treatment of pneumonia. I am induced to do so, however, because I hold that few patients ought to, or must necessarily, die of pneumonia. This is a bold statement, so bold as to be almost ludicrous when one compares with it the opinion of one of the most distinguished of American physicians.

“Pneumonia is one of the most fatal of acute diseases. Hospital statistics shew that the mortality ranges from 20 to 40 per cent.” He goes on, however, to say an analysis of a thousand cases at the Massachusetts General Hospital shewed that the average mortality was only 10 per cent. when the fatal cases occurring in persons over fifty years of age were excluded, and excluding also those fatal cases in which the patients were delicate, intemperate, or suffering from some complication.

A recent analysis of 708 cases at St. Thomas' Hospital shewed that the mortality progressively increased from the 20th year, rising from 3·7 per cent. under that age to 22 per cent. in the third decade, 30·8 per cent. in the fourth, 47 per cent. in the fifth, 51 per cent. in the sixth, and 65 per cent. in the

* Read before the Birmingham and Midland Counties Branch of the British Medical Association on December 14th, 1893.

seventh. This is a very important and very striking contrast. More than 86 out of 100 cases of pneumonia under the age of twenty recover; more than 65 of those over the age of sixty die.

In the face of facts like these it is impossible to believe that it is the disease that kills. It is odds of 25 to 1 that a youth will get well; it is almost a certainty that a man of sixty will die; and yet the same parts are affected by the same local changes. It cannot be the disease that kills; why, then, does a patient die?

Before attempting to answer this question it will be well to consider briefly what is the nature of the disease. Up to very recent times pneumonia was regarded as a local disease of the lungs; though before the days of bacteriological investigations suspicions had arisen in some minds that there were features about it which were not explained entirely by lung inflammation. To-day most books define pneumonia as an infectious disease, characterised by inflammation of the lungs and constitutional disturbance of varying severity.

The diplococcus pneumoniae is found more constantly than any other organism, and is thought to be the cause of the disease. 20 per cent. of healthy people are said to have this organism in the buccal secretion, and it is a matter of chance apparently whether, under untoward circumstances, pleurisy, meningitis, or pneumonia is set up.

From Berlin come some very interesting investigations by the Klemperers on this subject. They believe that the pneumococcus produces a poisonous albumen (pneumotoxin) which, when introduced into the circulation of an animal, causes elevation of temperature, and the subsequent production in the body of a substance (anti-pneumotoxin) which possesses the power of neutralizing the poisonous albumen which is formed by the bacteria. In man, during the pneumonia, there is thought to be a constant absorption into the circulation of this pneumotoxin, until at last the anti-pneumotoxin is produced, and then comes the crisis of the disease.

Whether this somewhat diagrammatic explanation is satisfactory or not, and whether the diplococcus pneumoniae which is found in 20 per cent. of healthy people and in nearly all cases of pneumonia, besides other diseases, is the cause of the disease I cannot say. But there is considerable reason, on clinical grounds, to think pneumonia an infectious disease with local symptoms. It occurs in epidemics sometimes, and it occurs more frequently in members of the same family in contact with each other—or in gaols or institutions where many people are living together.

The argument however which, to my mind, seems most convincing is that there is often so great a disproportion between the gravity of the constitutional disturbance and the extent of the local mischief. The physical evidences of pneumonia may be absent for a day or two or more, while the patient may present an almost perfect picture of the disease, and the constitutional disturbance may, and generally does, pass away, while the physical signs of the consolidation of the lung persist, and may persist, for many weeks.

Dr. Hawkins found in his analysis of 157 cases—

That in 110 the physical signs persisted from 7 to 20 days

„	35	„	„	„	20	„	30	„
„	10	„	„	„	30	„	40	„
„	2	„	„	„	44	and	48	„

Danger to life passes away, with very few exceptions, after the crisis, and danger, if any, then depends only on the accidents which may occur when the lungs are blocked with a mass of foreign and inflammatory material. It is obvious then that the great mortality of the disease is not due only, if even in a large degree, to the fact that a larger or smaller portion of lung tissue is consolidated. The zymotic affection, of which lung consolidation is the obvious and principal physical sign, must be credited with the great mortality, and it will thus be seen why the incidence of mortality is greatest amongst those who from failing power or old-standing disease are least able to fight against its inroads. A patient with pneumonia, waiting for the

crisis, reminds me of a beleagured city to which safety is sure to come if for a short time inroads from without can be resisted, and the citadel can be made strong until succour arrives. In pneumonia succour comes with the crisis, and the citadel is the heart. It is the heart that must be sustained, and from its sounds and the expression of its power in the pulse that we can learn best how our patient is progressing and how it will fare with him. It is a truism that in disease we have to deal with the patient, and in a minor degree only with the malady. True in all acute affections, this is especially true in pneumonia where the crisis is so little delayed, but it is a truth which is difficult to remember when the physical signs are so marked as in pneumonia. On the other hand, who does not realise the truth when we may have at the same time an athlete, a drunkard, and an underfed seamstress to treat.

There are a few cases of pneumonia in which the patient dies in a very few days from the virulence of the poison before the physical signs of the disease are manifest or, if manifest, may be but slightly marked; but putting on one side these cases there are two conditions from which we may look for danger: (1). Fever. (2). The specific alteration in the lungs. It is exceedingly rare for the temperature to range higher than 104° or 105° , and this only for a few days. This amount of fever, when compared with the long pyrexial condition of a case of enteric fever is indeed of trifling moment, and scarcely ever gives us any anxiety. It certainly, to my thinking, never justifies the use of antipyretics for its treatment, and a great responsibility is thrown upon those who by means of antipyrin and similar drugs seek to lower the temperature, while they lose sight of their depressing influence on the heart and nervous system.

The blocked condition of the lung, again, is rarely a cause of anxiety, for only in exceptional cases do we get an amount of unusable lung at all equal to that which we get when the lung is compressed by a pneumothorax or large pleuritic effusion. Of what, then, with Professor Jürgensen, would I ask, does a

pneumonic patient die? and with him I would answer, From failure of the heart—a failure to which the fever and the lung condition, and above all the third unknown quantity, the zymotic poison, contribute. It is possible that in the future we may understand the last of these causes more thoroughly, but at present we are ignorant.

The fever, as I said before, is of short duration and not of great intensity; it is proportioned rather to the severity of the infection than to the extent of consolidation, for it precedes this latter in its development, and disappears while the lung is as dense as ever. Its effect upon the heart, despite its short duration, is marked, and is brought about in several ways.

1 The cardiac beat is increased in frequency, the period of rest is shortened, and the systolic period is lengthened at the expense of the diastole.

2.—The muscular tissue of the heart degenerates owing to the fever; the primitive fibres diminish in number, and there is a lessening of the contractile substance of those that remain.

So, then, we have a heart that is weakened by tissue changes and, at the same time, forced to do an increased amount of work with diminished powers. The lung-changes contribute to this increase of work by the greater resistance in the pulmonary circulation, and by the loss of the normal ratio between the aerating surface and the amount of blood to be aerated. It seems to me that this sudden upset of the balance between blood and lung has not been taken sufficiently into consideration, and that it is a very important factor in the causation of dyspnoea and cardiac insufficiency.

The pulmonary oedema which many writers speak of is, I believe, of very rare occurrence, and occurs only when the heart is no longer able to do its work. It does not occur early in the course of a case, and is never more than a symptom of cardiac insufficiency. It differs, therefore, entirely from the concurrent bronchitis which, though of infrequent occurrence, renders the prognosis so grave when it does occur. It is manifest, then, that upon the condition of the heart does prognosis depend,

and that to its maintenance in a state of sufficiency should our efforts be directed, either by an endeavour to assist its contractile force, or by the diminution of its work.

Before considering the treatment of the disease it will be well to quote the defence of Trousseau when charged with inconsistency in the methods he had advocated.

He says :—"There is produced, on the one hand, the conviction that the physicians who go on continually pursuing the same treatment, notwithstanding a change in the epidemic constitution, are men of narrow views ; and, on the other hand, there is a very great influence exerted by the epidemic constitution upon the action of the same medicines in diseases of which the local manifestations are the same."

This surely is the philosophic spirit which should animate all practitioners, though, if I might venture to alter a great master's dictum, I would substitute individual for epidemic, and regard those unwise who treated the disease rather than the individual. Epidemic constitutions are responsible for many curious methods of treatment, and for many curious fashions in therapeutics. I do not deny that there may be and are very great differences in the severity of the character of pneumonia, as is the case in all zymotic diseases, at different periods or in different epidemics, but I am still more sure that though the treatment generally may have to be more energetic and thorough, it must still and all the more depend upon individual constitutions for its variety rather than upon what may be called epidemic constitutions. It seems ridiculous that it should have been the practice to bleed in cases of pneumonia at the beginning of this century, and the exception to do so at its end : indeed I do think it supremely ridiculous that there should be such a difference in so important a procedure. I cannot believe that men and women are so very different as to justify such opposite treatments now and then. It is curious in many phases of life to see how like we are to our ancestors, and it is difficult to believe that we have changed in our physical condition alone. Horace Walpole, a hundred years ago, grumbled at the weather being

so much worse than it was when he was a boy, just as we are inclined to do to-day, and Pepys chafed at the dilatory and inefficient British workman as much as we who are inclined to regard him as a *fin de siècle* product.

My own cases at the General Hospital during the first six months of this year numbered forty-two, a large number to treat in this period in an average of about twenty-seven beds, though doubtless not a large number from which to draw inferences as to methods and results of treatment. I have, of course, treated many more before and since this period, but the rapid succession of these cases made a profound impression on my mind, and very largely excited my interest in the disease. The mortality was under 17 per cent., which no doubt is a fairly satisfactory ratio compared with the mortality generally; but, believing as I have grown to believe, that every case ought to get well, I must confess my great disappointment at such a large percentage of deaths, and I venture to hope that a greater concentration of mind on the principle of treatment will produce better results.

This principle of treatment is briefly the keeping of careful observations on the condition of the heart and the pulse. If the heart keeps up to its work, the patient will recover, and we have only to keep it going for a very few days. No doubt this limited course of the disease is responsible for much of the expectant treatment that has characterised modern therapeutics; but I think it cannot be wiser to wait for evidences of cardiac failure before beginning treatment than it is to defer protecting ourselves against robbery until the thieves appear. We know the heart must suffer; and though no doubt a young heart and a healthy heart may get through the disease until the crisis without our patients' lives being endangered, I hold it to be an unwise risk to run, and one to which it is unfair to subject our patients. I give all my cases small doses of strychnia and belladonna at the outset, and gradually increase the dose if there be any symptoms of heart failure. In the majority of my cases no other treatment has been necessary, beyond that which is indicated, for the relief of pain and restlessness.

If I find that, owing to previous disease, or to a constitution enfeebled by age or insufficient food, the patient's power of resisting the disease is small, I give stimulants with a very free hand. Short of the production of nausea and vomiting, I am convinced that brandy may be pushed to a much larger extent than we are in the habit of doing; and when life depends upon the patient's heart being kept going for a day or two until the crisis is reached, I give stimulants largely. Half an ounce of brandy every hour is not too large a dose and double that quantity may be given if the pulse increases in rapidity, and any signs of lividity occur. Brandy is, I think, the best for use if the tongue be moist, but when the tongue is brown and dry, champagne is to be preferred. Digitalis has been very freely used by many practitioners throughout a case, but I do not think wisely, as there is apt to be an alarming collapse in these cases after the crisis has occurred; but I think it may very properly be given in full doses towards the end, when the heart is toiling or any signs of œdema of the lungs are present.

When, however, there are signs that the right side of the heart is becoming dilated and the ventricle is not emptying itself properly, I am every year getting more and more convinced that the proper proceeding is to bleed the patient. During the last two years I have bled in a fair number of cases with only one death occurring afterwards, and in that case my only regret is that I did not bleed earlier. The relief in every case was marked; and without the slightest desire to return to the indiscriminate bleeding of our forefathers, I feel that we have too long neglected so ready a means of giving temporary help to a struggling heart by diminishing for a brief period the excessive amount of work.

Fashion, which is responsible for so many curiosities in medicine, led a year or two back to the employment of oxygen for the relief of the dyspnœa and distress that are symptoms of some cases. I tried it fully, as I believe to be my duty, though without the faith that is said to work miracles, and certainly too often prompts medical men to believe they see miracles worked.

So far as my experience goes, I have never seen more than the most fleeting advantage from the use of oxygen, and as I feel to-day, shall never use it again. It was, I think, pitiful to read week after week a year or two ago in the pages of the medical journals records of cases in which valuable time was lost in the futile administration of oxygen. I remember one in particular: an athletic young man died of double pneumonia. Oxygen had been given with assiduity for a day or two, and at last he was bled. The report said this did him good for a time, but the relief came too late.

I may quote a case in which venesection was performed recently for a youth under my care at the General Hospital.

H. H., aged 16, was admitted on the afternoon of Oct. 17th, 1893, into the General Hospital. He gave a history of winter bronchitis, and of a more severe cough and shortness of breath which had come on two or three days before.

On admission, his temperature was 102.5 and his respirations 24. Loud bronchitic sounds were heard all over the chest, and at the lower part of the right lung posteriorly were distinct evidences of pneumonic consolidation, dulness on percussion, bronchial breathing, bronchophony, and increased vocal fremitus.

Next morning his general condition was much worse. His temperature about the same, but the respirations had increased to 40 per minute, and the pulse was 112, but of fair tension. There were loud râles over the whole of the lung area. The sputum was abundant, frothy, and tinged with blood. His condition was evidently critical: his face was flushed and dusky, his breathing laboured, and he was much distressed. He was bled from the right median-basilic to the extent of sixteen ounces. His general condition improved immediately—the face became of a good colour, and the pulse tension was lowered. He soon went to sleep, and though his temperature was 104° the same evening he had a good night, and next morning the temperature was 100°, while his general condition continued improved. He subsequently did very well indeed, and left the hospital on November 6th.

There were one or two interesting facts about this case which may be noted. In the first place, greatly to my surprise, the course of the pneumonia seemed to be shortened by the venesection. The crisis occurred on the fifth day of the disease, and though this is known to occur occasionally it is certainly not common. Under the circumstances it is impossible to say that the venesection precipitated the crisis, but it is at the least possible.

Dr. Pye-Smith read a paper on venesection in disease before the Medical and Chirurgical Society two or three years ago, and special reference of a favourable kind was made to its use in pneumonia, especially during the early stage of the disease. No doubt its indiscriminate use at all stages had much to do with the abandonment of the practice, but still more responsible for this was the fact that bleeding was recommended on various theories which have been proved erroneous or inadequate to justify its recommendation.

It is a difficult matter for anyone to attempt to lay down a law of practice, or to determine what is the proper time for venesection. Of one thing only I feel sure—that to be useful it must be done either early in the course of a case, if the patient is a strong vigorous man in the prime of life, or at the earliest indication of dilatation of the right side of the heart. We must therefore watch with anxious solicitude those cases in which the pneumonia is complicated by bronchitis, and regard any dusky suffusion of the face, or an increase in the rapidity of pulse disproportionate to the number of respirations, as a reason for keeping in mind the possibility of venesection being necessary.

Dr. Hughes Bennett successfully combated the following four principles on which blood-letting has been practised.

1. The materies morbi would be diminished.
2. Less blood would flow to the inflamed part.
3. The increased quantity of blood in the part would be lessened.
4. The character of the pulse was the proper index to the amount of blood that ought to be drawn.

It is little wonder that a practice based on such principles should fall into disuse, but it is a thousand pities that it should have become almost obsolete ; and one cannot but wonder with Sir George Humphry, I think, how a practice once so common, and very often so useful, should ever be forgotten.

Professor Jürgensen, of Kiel, strongly advocated and employed cold bathing in cases where the fever was at all high ; and claimed that he never saw bad results if the treatment were carefully carried out, and stimulants administered at the time of the bath. This is a method of treatment which is difficult to carry out in adults, and still more difficult, for obvious reasons, to employ in private practice. Professor Trousseau is said to have expressed the hope, when discussing this treatment, that, if he must have pneumonia, he hoped it might not be in Kiel. Personally I have little experience of it, but I tried it once with the most beneficial results in the case of a child of four under my care in the General Hospital.

The patient was admitted on September 21st, 1893, with an attack of apical pneumonia affecting the whole of the upper lobe of the right lung ; and by September 24th the remainder of the lung had become involved. On the morning of September 25th, the temperature was 104° , though the apex already shewed signs of clearing. At mid-day, the patient was placed in a bath at 95° and kept there for twelve minutes, until its temperature had been lowered to 85° by the addition of cold water. Half-an-hour afterwards the thermometer registered 105° , and at two p.m. the bath was repeated. The temperature again rose to 104° , and a third bath was given at five p.m. From this time the temperature fell steadily during the night and following day, and on the morning of the 27th was subnormal. The relief was very marked, and I should certainly be disposed to try it again in similar circumstances. The restlessness was very marked before the bath, and though the temperature went up after each bath, the child slept a little after each, and was much more composed. It was more on account of the child's restlessness than owing to the high temperature that I prescribed

the bath at all. It is of course a very important object to induce sleep. and, if there is no concurrent bronchitis, I see no reason why we should not give full doses of opium to attain this. The mental excitement is often very great in adults, and I believe that by steadying our patients with opium we may often greatly improve their chances of recovery.

This mental exaltation and delirium are often associated with pneumonia of the apex, and I have several times been asked to see, as cases of meningitis in children, what have proved to be cases of apical pneumonia. The children are not only delirious, but complain of pains in the head; and the likeness to meningitis may be very great.

We may be put upon our guard by observation of the *alæ nasi*, which may be seen to be dilating freely, and by further observation of the ratio between pulse and respiration. This is always greatly altered, and from being four to one, may become only as two to one. This same care must be exercised in children where there is basic pneumonia, for here again the pain is generally referred to the abdomen, and cough may be almost absent, while expectoration is scarcely ever present in children under the age of 6. In adults, too, sputum may be absent throughout. Its presence in large quantities is a very bad sign, for it indicates either a concurrent bronchitis or an imperfect degree of consolidation, which occurs in adynamic subjects. In these cases the sputum is thin, and of the colour of prune juice, and should very gravely modify our prognosis. The pain which so often occurs at the commencement of the disease is pleuritic in character. It has been and still is the custom to use poultices to relieve the pain, but in my practice I have entirely discarded them. I believe the weariness and the fret of frequently changing cold and damp poultices for fresh ones, hot and burning, more than annuls the benefit derived from the tardy relief of pain. For this purpose I always use leeches, and do not think I have ever failed to relieve the pain by their means, except when there is diaphragmatic pleurisy, for the relief of which there is no certain cure, though a hypodermic injection of morphia may be tried.

In conclusion, I would quote Hughes Bennett as follows :—

“Acute pneumonia is not a fatal disease if the strength be supported and there be no complication.” And again : “In any and every case the disease goes through its natural progress if the system be not too much exhausted either naturally or by the interference of the physician.”

That Dr. Bennett was justified in the first of these propositions by his experience, is abundantly clear from the following statistics :—Of 129 cases occurring in a period of $6\frac{1}{4}$ years, only four died—from diarrhoea, albuminuria, acute meningitis, and meningitis respectively. Dr. Bennett's figures have been the wonder and despair of his successors, and are only another example of the adage that nothing is more fallacious than figures except facts.

Without hoping to equal his statistics, I feel sure that we shall all get better results if we bear in mind the necessity of keeping the heart going until the specific poison has spent itself. It is possible that at some future date we may have an antidote to the disease ; and even now the Brothers Klemperer are making experimental injections of anti-pneumotoxin with the object of curtailing the disease. However this may be, we need never lose sight of the fact that if we can keep our patients going for one week only, we shall save the bulk of them ; for it is during this week that of 100 who die, at least 80 per cent. succumb.

Time will not permit me to deal with the pneumonia of drunkards, and the still more destructive form we get in influenza ; though here, again, while the difficulty of success is greater, we have ever before us the never-failing truth of the maxim—“*Sine pulsu nulla therapeia.*”

SOME POINTS IN THE PATHOLOGY OF LEUCOCYTHÆMIA.

BY DOUGLAS STANLEY, M.B.

PATHOLOGIST TO THE GENERAL HOSPITAL, BIRMINGHAM.

By the application of recent improvements in differential staining to the blood, under various pathological conditions, much has been added to our knowledge of diseases such as leucocythæmia. Until quite lately little advance had been made in this country towards throwing light on the pathology of this obscure affection. During the last few months there have been three well marked cases under treatment in the General Hospital and, through the kindness of Drs. Saundby, Simon, and Stacey Wilson, I have had opportunities of making many examinations of the blood, etc., and on these the following remarks are based. First, a word as to methods. In all cases where the blood is examined, this should be done with and without staining reagents. The blood should first be examined in one or other of the various "fluids." I generally use Hayem's.* A small drop of this is placed on the lobe of the ear and then a slight cut is made *through* the fluid with a sharp scalpel (a needle alters the relation of corpuscles, as the puncture does not allow of proper exit.) A cover-slip is then applied to the fluid containing the blood, and is then placed over a "hollow cell" for examination. In this manner a general idea is obtained of the blood, but more especially of the shape, size, and characters of the red disks. Having wiped the remaining fluid away from the ear, estimations may be made of the number of cells and the hæmoglobin. In giving the numbers it is best to state the figure, not the percentage, and in counting the white corpuscles, as far as possible the relative numbers of the various forms should be given: frequently the ratio of white to red cells is only given in records of cases—this conveys no information.

* Sodid chloride, 1 grm.; sodid sulphate, 5 grms.; mercuric chloride, 0.5 grm.; distilled water, 200 cc.

Lastly, film preparations may be stained. This is done by applying a cover-slip to the bleeding point, drawing it lightly across to get a thin layer, passing it once through "fixing fluid" (mercuric chloride or Flemming's), washing in distilled water, staining, dehydrating, clearing in xylol, and mounting in balsam. It is needless to mention the various combinations of stains: Ehrlich-Biondi is one of the best. The blood may also be embedded in paraffin and sections cut according to Muir's method,* whose paper contains full details.

The following is a brief account of the cases :—

Case 1. George A., age 44, great enlargement of spleen; lymphatic glands not affected; tenderness on percussion over bones; appears very anæmic; considerable hæmorrhage from pharynx and nares. Blood: R.B.C. = 1,380,000; nucleated red cells present, and sometimes considerable poikilocytosis; W.B.C. = 550,000, consisting of (*a*) multinucleated leucocytes, increased; (*b*) uninucleated leucocytes, slightly variable; (*c*) large eosinophilous leucocytes, present; (*d*) large uninucleated leucocytes, with neutrophile granules sometimes present in very large numbers; (*e*) mast-cell leucocytes, usually present. Mitotic figures seen occasionally. Proportion of (*c*) apparently decreasing; proportion of (*d*) apparently increasing.

Case 2. Ellen B., age 44, considerable enlargement of spleen; lymph-glands not affected; has marked anæmic appearance. Blood (one examination only): R.B.C. = 2,800,000 circa; some variation in size and slight deformity, no nucleated cells seen; W.B.C. = 90,000 circa. (*a*) Multinucleated leucocytes, increased; (*b*) uninucleated leucocytes, in about normal number; (*c*) eosinophilous leucocytes, present in large numbers; (*d*) large uninucleated leucocytes, present in small numbers; (*e*) mast-cell leucocytes, present in small numbers; a few mitotic forms seen.

Case 3. Rose R., age 32, considerable enlargement of spleen; lymphatic glands not affected; tenderness on percussion over bones; marked anæmic appearance. Blood (23rd October, 1893): R.B.C. = 1,980,000; some variation in size of

* *Journ. of Anat. and Phys.*, vol. xxv., page 258.

disks, slight poikilocytosis, nucleated red corpuscles present in small number; W.B.C.=300,000. (a) Multinucleated leucocytes, increased; (b) uninucleated leucocytes, appear unchanged; (c) large eosinophilous leucocytes, present, numerous; (d) large uninucleated leucocytes, with neutrophile granules also present, but do not exceed (c); (e) mast-cell leucocytes, present, but not numerous.

November 10th.—General condition of patient becoming worse; much diarrhœa. R.B.C.=1,840,000, otherwise as before. W.B.C.=330,000; increase of (d) and (a); blood pale, but not "purulent."

November 15th.—Diarrhœa, vomiting, abdomen flaccid, flushing of face, decrease in size of spleen, general aching pains, extreme tenderness over all the bones.

November 17th.—Marked flushing of face, pupils contracted, respiration occasionally stertorous, patient semi unconscious, spleen smaller, death.

From this short account we see that these three cases are all much alike, and belong to the group sometimes called *splenic*, but which has recently been termed, especially by Continental writers, *spleno-medullary*. The reason for this we shall see later. Other varieties of leucocythæmia are described according as the lymph-glands, etc., are affected; and there is supposed to be a form called *myelogenous*, in which neither spleen nor lymph-glands are apparently affected.* Recent observations, however, go to shew that this term may perhaps be applied, at any rate in part, to all cases of leucocythæmia, the splenic and other conditions being probably secondary; and that the differences observed in many cases are due not so much to the condition of the spleen or lymph-glands, but rather to a variation in the myelogenetic process. As the cases quoted are all of the same type, the following remarks refer to that type; the more so, as the so-called *lymphatic* form being apparently rarer, I have not had an opportunity of seeing one for some little time.

It will be seen from the notes given above that in the blood

* Hamilton. Text book of Pathology, p. 510.

THE NATURAL MINERAL WATERS OF

State

VICHY

Springs.

CELESTINS.—For Diseases of the Kidneys, Gravel, Gout, Rheumatism, Diabetes, &c.

GRANDE-GRILLE.—For Diseases of the Liver, Biliary Organs, &c.

HÔPITAL.—For Stomach Complaints.

HAUTERIVE.—An excellent TABLE WATER.

CARLSBAD

**NATURAL MINERAL
WATERS**



Are imported in Bottles and used in treatment of CHRONIC GASTRIC CATARRH, HYPER-ÆMIA of the LIVER, GALL STONES, CHRONIC CONSTIPATION. DIABETES, RENAL CALCULI, GOUT, and Diseases of the Spleen, arising from residence in the Tropics or malarious districts.

THE NATURAL

CARLSBAD SPRUDEL-SALT

Is Alkaline, and readily soluble in water. In small and frequent doses it is an efficient *diuretic*, but as an *aperient* it should be taken *before breakfast* in doses of from 1 to 2 teaspoonfuls dissolved in water. To increase the *aperient* action of the Carlsbad Mineral Water, a teaspoonful of the Natural Salt dissolved in water should be added.

SOLE IMPORTERS—

INGRAM & ROYLE, 52, Farringdon St., London, E.C.

Samples and Pamphlet on Application.

NESTLÉ'S FOOD

FOR

INFANTS & INVALIDS.

"Invaluable in Cholera Infantum."

"Beneficial as a Diet in severe cases of Typhoid."

"Renders valuable assistance in Wasting Fever."

PAMPHLET containing Extracts from Standard

Medical Works in which the above

Testimony is given, sent free with

Sample Tin on application to

H. NESTLÉ,

9, Snow Hill,

LONDON,

E.C.

HIGHEST HONOURS at the CHICAGO EXHIBITION,
viz., **THE MEDAL** and **DIPLOMA** have been
awarded both to NESTLÉ'S FOOD and NESTLÉ'S MILK.

ATTENTION

is also drawn to

NESTLÉ'S
SWISS (CONDENSED) **MILK.**

Which through its RICHNESS in CREAM
and UNIFORMITY of QUALITY has obtained the
LARGEST SALE IN GREAT BRITAIN.

It can be used for all purposes of FRESH MILK.

NO SAMPLE OF MILK SENT.

we have a departure from the normal in both the red and white corpuscles. *The red disks* are greatly reduced in number, but the figures given are by no means the latest recorded, for in a case of Sorensen's* they were found reduced to 470,000. But of greater interest than the decrease in number is the fact that they present variations from the normal standard. Thus, many shew diminution in size, some measuring 4μ – 5μ (normal average = 7 – 8μ); this was especially well marked in Case 1, George A. At the same time I have rarely found any increase in size. Poikilocytosis is also observed in leucocythæmia, and of the above cases that of George A. is prominent in this respect. But this feature never appears to reach the same extent as in some other blood diseases. Next to pernicious anæmia, it is in leucocythæmia, perhaps, that we most frequently find nucleated red blood corpuscles, and they have been especially mentioned by Ehrlich, but Hayem does not seem to think they occur so often. They were present in six cases recorded by R. Muir;† and in Cases 1 and 3, quoted above, they were also present. In Case 2 none were to be seen on the only opportunity I had of examining the blood; but as they vary much in their numbers and even appear to be occasionally absent, it is not certain that none were present. This variation may account for the difference of opinion on the part of some observers. In Case 1 they were at times so numerous that four or five were present in nearly every field. They presented the ordinary circular form, with a distinct single, sometimes double nucleus; and Muir has found a triple form. In none of the above cases did they shew the "poikiloblast" form. On some few occasions I have observed some small (3μ) corpuscles of globular shape, somewhat suggestive of "Eichorst's corpuscles," but I am uncertain as to their nature; they may be merely detached processes of poikilocytes, which sometimes assume a spherical form. They were only present in Case 1. As Eichorst's corpuscles are more often seen in conditions of

* Virchow-Hirsch, *Jahresbericht*. 1874, ix., 2.

† *Journal of Anat. and Phys.*, 1891, p. 486.

pathological blood destruction than in cases of pathological formation, it will be seen later that there is reason for their not being of this nature. Red blood corpuscles enclosed in large cells have been observed by Osler,* but none were seen in any of these cases.

White Corpuscles.—One of the most striking features in leucocythæmia, and one which has always been the main point in its diagnosis, is the great increase in the number of white corpuscles in the blood. In some cases these have equalled, or indeed exceeded the red in number, the approximation being of course helped by the reduction in the number of red disks. Recent researches in this disease shew that increase in the number is not all, but that there may be alteration in the number of the various forms of white corpuscles, and now there is much evidence to shew that forms which do not occur normally in the blood may be present. In healthy blood we find (*a*) uninucleated leucocytes, some of which are very small (lymphocytes), others somewhat larger; (*b*) multinucleated leucocytes, containing what seems to be several nuclei, but which is found to be a ramifying or multipartite nucleus. These contain Ehrlich's ϵ -granules (neutrophile)† and are about double the number of the first (*a*) variety. A few cells apparently intermediate between these forms may be seen. (*c*) Large cells (10μ) containing a distinct bean-shaped nucleus and a large number of granules which readily stain with aniline acid dyes, and hence called "oxyphilous," or more commonly "eosinophilous:" these form about 3 per cent of the white corpuscles. Comparing leukæmic blood with the normal, we find that the first variety (uninucleated) are apparently not increased or altered,‡ but that the second (multinucleated) variety is found in much greater number, their proportion to the uninucleated being 10 — 15 : 1. They seem otherwise unaffected. The third (eosinophilous) are

* *Medical News*, 1886.

† According to A. E. Wright and Bruce these granules are really oxyphilous. *Brit. Med. Jour.*, 1893, i., 400.

‡ I would remind the reader that the conditions described refer only to the *spleno-medullary* form

also greatly increased, and form a prominent feature in the field. They are also modified, the majority being very much larger than those seen in healthy blood, and their granules seem much coarser.

There are however other white corpuscles quite distinct from those seen in healthy blood. These are large mononucleated cells, measuring $15\text{ }\mu$ – $18\text{ }\mu$, having a large nucleus almost filling the cell, which, as it contains little chromatin, reacts but slightly to staining reagents. This nucleus may be indented or curved, but is not multipartite. The protoplasm of the cell takes up safranin well, and appears to contain neutrophile granules (Spilling, Ehrlich.) These characters shew that they differ greatly from any of the normal white corpuscles. These cells have long been observed in leucocythæmia, and may occur in very great numbers. Muir* found them, in one case, to form 50 per cent. of the white corpuscles in the blood. In the case of George A., I several times found them quite as numerous, and on two occasions up to about 60 per cent. We shall consider their variations later. Another variety of cell found in leukæmic blood is that containing γ -granules, also called "mast-cells." It is very difficult to say what relation these bear to the other corpuscles, or even to the disease; it is supposed that they sometimes occur in normal blood (Muir).

Having thus reviewed the various forms of red and white corpuscles, both normal and abnormal, in leukæmic blood, we may consider their origin. There is now every reason for believing that the red corpuscles take origin from the "erythroblast" cells in the red marrow of certain bones, these being considered by Bizzozero to be specialised for that purpose and not derived from the leucocytic cells of the marrow. These cells "multiply by karyokinesis, and become gradually transformed, in the mammalia, with disappearance of the nucleus, into the red blood-disks."† Schäfer goes on to say that his observations bear out this statement. This origin of red blood

* *Journal of Pathology*, vol. i., p. 128.

† Quain's *Elements of Anatomy*, 10th edition, p. 219

corpuscles in the marrow has most important bearings on the pathology of leucocythæmia. Schäfer does not consider that the derivation of red from white corpuscles, a view which was long favoured, can be altogether supported. Seeing, therefore, that small red-coloured nucleated corpuscles occur in the bone marrow in health, it is not improbable that, under certain conditions, these cells may pass into the blood as immature red blood corpuscles, bearing their nuclei with them. We know that nucleated red corpuscles may appear in the blood in many conditions of anæmia, where probably a great demand may call for a rapid supply of fresh corpuscles which may perhaps pass into the blood before properly maturing. In leucocythæmia, however, they have been noticed, when the reduction in number of the red corpuscles was not great, which points rather to increased production on the part of the red-marrow independently of any rise in the demand.

Is there any other evidence of abnormal production of corpuscles in this tissue? As is well-known, the leucocytes are derived from the various lymphoid structures of the body, among which is the bone marrow. When, however, we examine this structure we find various cells which are characteristic. These are large cells shewing eosinophile granules, and others corresponding in every way to those described above as the large uninucleated cells. The similarity between these two forms and those occurring in the blood in leucocythæmia is most striking, and has been now noticed by Spilling, Ehrlich, Müller, and many others, and they all agree in stating that these cells pass into the blood in leucocythæmia. As we have already seen, eosinophilous cells occur in normal blood, but in leukæmic blood they are very much larger, and this is considered by Müller and Reider* as of great importance, as shewing their origin in the bone marrow. The other form, characteristic of the marrow, is not represented in the normal blood. Owing to this similarity these two forms have received

* Ueber Vorkommen und klinische Bedeutung der eosinophilen Zellen. *Deutsches Archiv f. Klin. Med.*, xlviii.

the name of myelocytes. In Cases 1 and 3 the blood was examined several times on the warm stage, and it was always found that the myelocytes shewed no amœboid movement; and when the cells of the marrow are so examined it is found that the large eosinophile cells and the large uninucleated cells are also devoid of such movements. In the bone marrow these cells may be observed undergoing mitotic division, and one would expect, were it true that under certain circumstances marrow-cells pass into the blood, to find them still shewing mitosis, in the same way as red cells appear in the blood with their embryonic characters. This has now been noticed by Biondi, Müller, and recently by Muir.* On several occasions they were found in the blood in Case 1, George A.

It has often been suggested that the increase in the leucocytes in this disease may be due to their undergoing division in the blood; but were this so, we should surely find such division a common and constant feature. As it is, division cannot always be recognised; and, even when seen, it is only in the case of comparatively few cells.

Muir quotes Wertheim as recording two cases of acute "medullary" leucocythæmia where the blood shewed mitotic figures, and the loose marrow shewed them in great numbers.

In the case of Rose R. (No. 3) I was able to examine the sternal marrow fairly soon *post mortem*, with the result that a number of mitotic figures were found. All these facts would point, I think, to the bone-marrow as being the primary source of the disease. Cornil† has shewn, in describing the multiplication of marrow cells, that "dans les inflammations . . . les figures de karyokinèse sont incomparablement plus nombreuses qu'à l'état normal." It may be, therefore, that in leucocythæmia we have some morbid influence affecting the bone-marrow, and causing the pathological formation of blood cells; and in support of this is the tenderness on percussion over

* Op cit, p 131.

† "Sur la multiplication des cellules de la moelle des os." *Arch. de Phys.*, 1887, p 54

various bones, pointing to some irritative condition. This was present in Cases 1 and 3.

As stated above, there is also an increase of the multinucleated leucocytes in leucocythæmia, and probably, as would seem to be the case under normal conditions, these are derived from small uninucleated cells, which pass into the blood and there are transformed into the mature form. It has been found by Löwit * that there are more uninucleated leucocytes in the veins coming from the bone-marrow than in the arteries. These seem to be the forerunners of the multinucleated forms, but it is unnecessary to describe the process. It is perhaps in this manner that any production of white corpuscles on the part of the spleen takes place, but it is probable that this organ is more important as a destructive than a constructive agent, as we shall see shortly.

The great increase in the number of leucocytic cells seems therefore to be due partly to an increase of the usual white corpuscles, partly to an invasion of the blood by cells which normally should be found only in the bone marrow. Then, in the blood, these foreign cells seem to shew considerable variation. As stated in Cases 1 and 3, their ratio underwent changes. In Case 1, when first under observation, the eosinophilous cells were numerous, but after some time it was found that they were exceeded in number by the large uninucleated cells, and at this period the patient was suffering from considerable nasopharyngeal hæmorrhage. During the continuance of the bleeding there were many more of these large cells than of the eosinophilous, and although the former apparently decreased slightly about the time the hæmorrhage ceased they are now present in very large numbers. On some few occasions, especially in Case 3, I noticed the eosinophilous cells undergo changes, the granules seeming to break up, and to a large extent disappear, the cell becoming very like the large nucleated form. Whether this takes place usually is uncertain, but it may be that after the myelocytes (of both forms?) have been in

* *Sitzb. d. k. Akad. d. Wis. zu Wien*, Bd. xcvi., Obtheil iii.

the blood for some time they may undergo some degenerative change if the hæmolytic organs are unable to react upon them for any reason, and that the spleen is very likely the organ at fault is not improbable, for there is now much to shew that it has an important hæmolytic action. "From the fact that the total number of leucocytes in the blood after passing through the spleen (in health) is little altered, whilst the proportion of uninucleated forms is increased, it follows that a number of multinucleated corpuscles disappear from the blood during its passage. These must either be transformed into uninucleated corpuscles or be broken down. If they are divided into uninucleated corpuscles corresponding to their nuclei the total number of leucocytes would be considerably increased, which is not the case. . . . I accordingly believe that in the spleen some of the multinucleated leucocytes are broken down, while new uninucleated corpuscles are added to the blood."* This would also seem to be the opinion of Ehrlich.

Now, as shewn by the examination of the blood in these cases of leucocythæmia, there is increase in the number of multinucleated corpuscles, with but little or no increase in the ordinary uninucleated forms. This would point to a diminished destruction with probably increased production, seeing we have the importation of the myelocytes, indicating, as stated above, an abnormal condition of part of the hæmogenetic area.

If, then, we may suppose there is a large increase in the leucocytes, a large proportion of which are of an abnormal kind, what is the rôle of the spleen? It is probably, at first, able to cope with these cells, but after a time it is likely that these are passed into the blood in greater numbers and the spleen quickly becomes enlarged, on account of its acting as a sieve-like organ. It is a curious fact that rarely has one an opportunity of watching the increase in the size of the spleen in leucocythæmia, for almost all the patients present themselves with an already great enlargement. Now, were the spleen the organ primarily at fault, we should expect to see cases where the

* Muir. *Journ. of Anat. and Phys.*, vol. xxv., pp. 359-60.

enlargement was slight. If, then, in the course of the circulation, these vast numbers of corpuscles get carried to the spleen, many of them being several times larger than the ordinary forms, it is easy to understand that they would become partially arrested in the finer capillaries. We have evidence of this in the case of other tissues, but the spleen being an organ capable of extensibility, becomes much enlarged. If we also remember that these large cells are devoid of amœboid movement, we may perceive how easily they can cause blocking in the finer vessels of the spleen. This block in the spleen would prevent the ingress sufficiently rapidly of the ordinary cells which should be there broken up, and we should consequently find them remaining in the blood for a longer period and serving to increase the total of white corpuscles. We saw that in Cases 1 and 3 the myelocytes increased; in the latter, this increase was quite distinct during the last days of the patient's life, there being also a much larger proportion of multinucleated to uninucleated cells. The increase of the myelocytes may bring about a more complete block of the splenic vessels, then the spleen having, so to speak, disposed of its last contingent of multinuclear corpuscles, may become reduced in size; such has been noticed in cases of leucocythæmia, and was a distinct feature in Case 3. I have observed it in another case (not quoted above) of this disease, but here I had not made any differential examination of the various corpuscles.

Towards the end in Case 3 the patient was semi-comatose, and shewed marked flushing of the face. *Post mortem* the spleen was found considerably smaller than during life, and was soft and flabby, though its vessels were engorged. There was also great engorgement of the veins and capillaries on the surface of the brain. The blood, which was everywhere fluid, was "purulent looking;" indeed, in the large veins of the neck, it had quite the appearance of pus streaked with blood. When examined, it shewed enormous numbers of large cells, multinucleated leucocytes, myelocytes, etc., the large nucleated cells being the most numerous. These conditions

would therefore seem to indicate a rapid failure on the part of the spleen to free the blood from these cells, which therefore cause a complete blocking of the small vessels in important areas. The bone-marrow (sternal) was "purulent looking," and preparations fixed and stained in the usual ways shewed large numbers of "myelocytes" similar to those in the blood, some of which were undergoing mitosis.

These facts would point strongly to the myelogenetic nature of leucocythæmia, and help towards a better knowledge of its etiology; while the recognition of these abnormal corpuscles would aid greatly in its diagnosis. An increase of white-blood corpuscles, even to a considerable degree, is no uncommon occurrence, and may be seen in suppurative conditions, and diseases attended with high temperature. This leucocytosis is quite a different condition from leucocythæmia; for, as Müller and Rieder express it, in leucocytosis we find among the colourless cells only such as are found in normal blood; while in leucocythæmia we find elements which are never found under the same conditions.* Hence the importance of systematic examination of the blood. The variation of these corpuscles may possibly prove of prognostic value, but this can only be shewn by future investigations.

In conclusion, I desire to thank Drs. Saundby, Simon, and Stacey Wilson for their kindness in allowing me to make use of these cases under their care.

* Muller and Rieder. *Deutsch. Archiv f. Klin. Med.* Bd. xlviii., p. 118.

ABSTRACT OF THEORY OF MECHANISM OF CEREBRAL INJURY BY CONTRE-COUP.

BY F. J. ALLEN, M.A., M.B. CANTAB.
PROFESSOR OF PHYSIOLOGY, MASON COLLEGE.

WHEN the skull is struck forcibly at a particular region—say the occipital—the comparatively rigid cranium is driven, as a whole, *away* from the point of impact (forwards in this case); but the brain, owing to its softness, lags behind, and tends to flatten itself against the cranial wall on the struck side (occipital). This may cause direct injury. But the cranial wall here supports the brain-substance, and distributes the force of the blow over a wide area, rendering the injury less acute. The chief injury occurs on the opposite side (frontal), where the lagging brain tends to move *away* from the cranial wall and receive no support from it. *At the centre of the unsupported surface there is a point from which the soft brain-substance is tending to depart in all directions* in the act of flattening itself. At this point of greatest strain the rupture will occur. After the first rupture, waves of oscillation will occur, and these may increase the injury. If detachment of the dura mater can be caused by contre-coup, as some observers have affirmed, it should be the result of exhaust or suction at the moment when the brain recedes from the inner surface of the cranium. This so-called contre-coup detachment of the dura mater is said to occur only in the squamous region, where the dura mater is not so strongly attached to the bone as in other regions.

* Read before the Pathological and Clinical Section of the British Medical Association, on Friday, November 24th.

REPORTS OF CASES.



TWO UNUSUAL CASES OF PYREXIA.

UNDER THE CARE OF T. SYDNEY SHORT, M.D.

Anæmia associated with Hyperpyrexia.

Case 1. J. B., æt. 28, was admitted into the Infirmary on November 15th, 1892, complaining of weakness. She was very anæmic, and said that she had been in bed for three weeks at home, sleeping badly, and not taking her food well. She was quite well before this illness commenced, and the first thing that she noticed was what she considered a severe cold in the head, passing off in a few days, but leaving occasional shivering feelings followed by sweatings, which had continued since. About a week after she was taken ill, she got out of bed one day and fell down stairs, but she did not think, herself, that she was any the worse for this accident.

A careful examination was made on her admission, but nothing beyond the blood condition could be made out. She complained of no pain or uneasiness, and no physical signs of disease were noted beyond the anæmia. Her temperature was between 98 and 99° for the first twenty-four hours, but on the day following it ran up to nearly 102°, falling the next morning to normal. The day after this it again rose, and continued rising during the next twenty-four hours until it reached 102·4°, with a distinct rigor. Five grains of quinine were now administered, and the temperature fell to normal during the next twenty-four hours, with sweating. During the following two weeks the temperature was most irregular, rising to over 102° within every twelve hours, and usually subsiding to about 99 after the exhibition of quinine. On the 25th the temperature reached 104°, and on the 30th 106, in spite of quinine given

in 15-grain doses daily from the 26th. A wet pack brought the temperature down from 106° to 102.6° ; but rising soon after to 104.4° , she was sponged with tepid water, and a gradual fall ensued to normal.

These sudden rises in temperature were not accompanied on each occasion by rigors, although she usually sweated after the temperature was brought down by the quinine. The only evident rigors that she had were on the 18th and the 30th. The quinine was continued until the 8th of December, and the temperature only rose occasionally during that time, not exceeding 102° more than once. From the 8th the quinine was reduced to two grains without further rise.

During the whole time that this patient was under observation there was no enlargement of the spleen, no outward evidence of pus anywhere, and no tubercular signs or symptoms. She made no complaint whatever beyond that of weakness, and did not even suffer headache when the temperature was at 106° . She seemed rather amused that so much time was taken in recording her temperature, saying she felt quite well but rather weak. There was no mistake about the chart shewing the actual temperature of the body; she was carefully watched, and other precautions taken. I held the thermometer in the mouth myself on one occasion, when it registered 104° , and there was no doubt of the heat of the skin as experienced by the hand. The pulse varied from about 116 to 132, and the respirations from 32 to 44, when the temperature was high. The motions and urine did not throw any further light on the case. Iron was given in addition to the quinine, and she made a good recovery, returning home with a fair colour and to all appearances quite well on January 3rd, seven weeks after admission.

It did occur to us that this girl might have suffered from typhoid fever at home, and that her condition when under observation was due to some sequela. It was certainly not a relapse; and the absence of any history of abdominal tenderness, taken together with the condition of the stools, spleen,

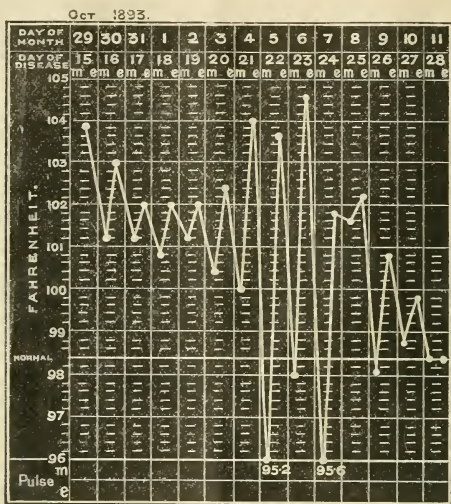
temperature, and general condition, pointed strongly to the fact that she had not had enteric at all. It is of course possible that pus was hidden away somewhere, causing the irregular temperature. We never had the slightest evidence however of the presence of pus in any internal organ, and gonorrhœa also was I think satisfactorily excluded.

It appeared at first sight as if some septic absorption were taking place, but her general appearance, cheerfulness, and feeling of well-being made this most improbable. The history and course, again, were quite unlike ague in any form. If this temperature were what is commonly (but possibly incorrectly) known as hysterical pyrexia, it was certainly not accompanied by any further manifestations of hysteria. Taking everything into consideration it seemed most probable that the temperature was an exaggerated form of the pyrexia frequently met with during the course of anæmias.

Ague occurring during an attack of Enteric Fever.

Case 2. W. R., æt. 29 years, was admitted with symptoms and signs of enteric fever. He said that he had been ill at home for about a fortnight, but before that he had been well since he had had ague in India about four years ago. He only had two attacks when out there and since his return to England he had suffered no recurrence. On the seventh day after admission, and apparently the twenty-first of the fever, he had a rigor with a temperature of 104° , followed by profuse sweating and a rapid fall of temperature to 95.4° , as taken in the rectum. This alarming drop was not accompanied by any symptoms of collapse, and the man himself said that it was his old ague back again. The next day he had a second rise of temperature to 103.8° with rapid fall to 98° , and on the following day another rigor occurred with subsequent fall of temperature to 95.6° . On the fourth day the enteric fever seemed to resume its ordinary course as if nothing unusual had happened and he made an uninterrupted recovery. The patient did not feel very ill in himself, according to his own account, during the conjunction of the fevers. His spleen was a little enlarged all through but

was not felt below the costal margin, except during the time of the rigors, when it could just be made out in that situation.



It is interesting to note that the occurrence of the rigors appeared to be powerless to increase the pulse rate to the degree that might have been expected during an attack of ague. The depression of the pulse rate usually occurring in enteric fever was not overcome by the malarial fever poison, for even with the temperature nearly at 105° , the pulse was never charted higher than 104 to the minute.

This case seems to illustrate well the fact that two poisons may be present at the same time in the body, each running a course independent of the other. The accompanying chart shews the temperature during the third and fourth weeks of the fever, and marks the incidence of the attack of ague.

TWO CASES OF HEREDITARY CHOREA,
OCCURRING IN TWINS.

BY JAMES W. RUSSELL, M.D., M.R.C.P.

JOSEPH A., aged 34, came to the out-patient department of the General Hospital on September 9th, 1893, with well-marked choreiform movements of the face, trunk, and limbs, of seven years' duration.

Family History.—Father suffered from gradually increasing chorea for the last nine years of his life, and died in a condition very similar to that of my own patient. Of his mother—the patient's grandmother—little is known; but she is said to have been mentally deficient at the time of her death, and to have suffered from some disorder of the limbs. No further history of nervous disease on the father's side can be obtained, and the mother's family history is a healthy one. The patient's twin brother is in a condition closely resembling his own, and notes of his case are given below. Another brother declares that he suffered from a slight and temporary attack of chorea at the age of twenty-three, but none of his friends were aware of it at the time. Three sisters and two more brothers are quite healthy.

Present Condition.—There are constant choreiform movements affecting the greater part of the body, which are aggravated and sometimes become very violent during observation. Coupled with many extremely irregular movements, especially of the trunk and arms, there is a decided tendency towards the constant repetition of a few more definite actions. This is most marked in the face, where the right angle of the mouth is every few moments drawn up to its extreme limit, the orbicularis palpebrarum contracting at the same time; whilst there is a tendency to throw the arms for a moment into a position of rigid extension before any voluntary movement can be carried out. The legs also tend to become rigid in walking, giving an almost spastic character to the gait. Most of the movements continue to a certain extent during rest; but they cease during,

and do not interfere with sleep. The knee-jerks are exaggerated, and slight ankle clonus can usually, though not invariably, be obtained; the electrical reactions are practically normal. There is no difficulty in micturition or defæcation. The optic discs and heart are unaffected. The mental condition appears to be a little impaired. This is most obvious when speaking of his own case, the patient's statements in this respect not being very reliable; otherwise he possesses a fairly accurate memory, and answers questions in an intelligent manner.

The treatment has consisted of a course of arsenic and iodide of potassium, lasting over a period of six to eight weeks. At the end of this time, no improvement in the symptoms could be discovered, and zinc was tried; but the patient was so convinced that he was improving under the former treatment, and that the change was one for the worse, that a further trial was given to arsenic. I have, however, been quite unable to detect any change in his condition.

The twin brother of the above patient has never been under my care, and I have seen him once only. I am indebted for my notes of the case to Dr. Douglas Stanley. In this case also the disorder first made its appearance seven years ago, a little earlier however than in the case of my own patient. The legs are said to have been affected before any other part of the body. The patient is remarkably like his brother in appearance, but the movements are less severe. When at rest, the only movement noticed is a frequent throwing back of the head and retraction of both corners of the mouth. During exertion, movements of the arms and trunk are present, very similar to those of the former patient, though less pronounced; and the same spastic character of gait is evident. The reflexes are greatly exaggerated, and ankle clonus is easily obtainable. The optic discs are normal. The mental condition is good, and the patient is said to amuse himself by reading; in disposition he is described as being very obstinate.

In the above cases, the absence, at any rate of any considerable degree of mental deterioration, after a lapse of seven years,

LORIMER'S

COCA

WINE

Operates as a Nerve Stimulant and muscular Tonic, much used in relieving fatigue from excessive mental and physical exertion, and where a general toning or strengthening of the system is needed.

Useful in various disturbances of the digestive organs.

CAUTION.—In order to avoid the substitution of imitations, often worthless, and consequently disappointing in effect, the Medical Profession are respectfully requested to specify "Vin Coca (Lorimer's)" when prescribing.

Prepared from Coca Leaves (Erythroxylon Coca).

As an ordinary restorative it should be taken two or three times a day in wine-glassful doses.



ALWAYS
UNIFORM AND RELIABLE.

A Retired Aged
Gentleman writes us:

"I was led to try Lorimer's Coca Wine, and the effect was simply marvellous. My pulse rose to its old rate of 64, in a few days my appetite returned, and I have not known fatigue since, though out in my garden seven or eight hours every day. In fact, I am stronger now than I have been during the past five years and the blessing I feel it . . . no tongue can tell.

"My whole frame thrills with gratitude."

Supplied to the Profession in Imperial Pint bottles at 29/- per doz. nett.

LORIMER & CO., Britannia Row, Islington, LONDON, N.,

Will be pleased to supply Lists and Specimens to Members of the Profession, free on application.

BULLOCK'S PEPSINA PORCI.

DOSE—2 to 4 grains.

BULLOCK'S ACID GLYCERINE OF PEPSINE.

DOSE—1 to 2 drms.

In this preparation advantage has been taken of the solubility of Pepsine in Glycerine to produce a convenient and desirable *liquid form* of this valuable medicine; whilst the preservative qualities of the menstruum confer upon the Acid Glycerine of Pepsine the property of keeping for any length of time.

May be prescribed with most substances compatible with acids.

In 4 oz., 8 oz., and 16 oz. Bottles, and in bulk.

The published experiments of G. F. DOWDESWELL, Esq., M.A., Cantab., F.G.S. F.L.S., &c.; Dr. PAVY, Professor TUSON, the late Professor GARROD, Dr. ARNOLD LEES, and others, conclusively demonstrate the excellence, high digestive power and medicinal value of the above preparations.

. *In prescribing either of the above preparations, it is suggested to insert in parentheses as follows (Bullock).*

J. L. BULLOCK & CO.,

3. HANOVER STREET, HANOVER SQUARE, LONDON, W.

EXETER ASYLUM, DIGBYS, NEAR EXETER.

This Asylum, newly erected, is lighted by electricity, and is specially designed and constructed for the proper treatment of the insane.

The situation and climate are most salubrious, the Buildings having a southern aspect, and about 90 acres of land are attached to the Asylum.

Private Patients are admitted at £1 per week. This sum includes everything except clothing.

For forms of admission, order, &c., apply to the Medical Superintendent.

"The wards are in excellent order, bright and cheerful; and those occupied by the patients of the private class should attract many, whose means are limited, from all parts of England."—*Extract from the Report of the Commissioners in Lunacy, Feb. 14th, 1893.*

is somewhat unusual. Wharton Sinkler describes two varieties of the disease, one of which begins with signs of mental weakness simultaneously with or before the onset of the movements, the other presenting such symptoms only after a period of some years. Here, however, there is certainly an unusual delay in their appearance. The condition of the reflexes coincides with that which has been present in most of the recorded cases; though it may be noted that Gowers describes them as being usually normal, and that in Dr. Suckling's case, published in this Review in September, 1889, the knee-jerks were said not to be exaggerated. In all other respects, including the family history, which rarely extends beyond two or three generations, the cases are typical examples of the disease.

PERISCOPE.

SURGERY.

Treatment of Surgical Tuberculosis.—Dr. Jeannel, of Toulouse (*Semaine Médicale*), recommends the following treatment:—After the tuberculous area has been laid bare and the neighbouring parts covered with cold compresses, a tampon soaked in seething salt water (of a temperature of 108–110° C.) is introduced into the focus, and all its diverticula thoroughly exposed by friction to the action of the boiling water. This procedure is repeated with a second tampon, and, after it has been carried out for five or six times, it may be assumed that all the diseased tissues have been destroyed, as it is known that tubercle bacilli cannot resist a temperature of 100° C. Jeannel has successively treated several cases of suppurative local tuberculosis by this method, in some of which there were numerous fistulæ.—*International Journal of Surgery*.

Empyema and its Proper Surgical Treatment.—Dr. Carl Beck, of New York city, at the Pan-American Congress, read a paper on the above subject. The essential question in this paper was

which of the three methods of treatment used—aspiration, incision, or resection—gave the best result. From his personal experience, together with statistics collected, it proves resection the method of treatment for obtaining the best recovery. Resection, he found, was gaining ground daily among surgeons. Some surgeons have been in the habit of making an incision first, and then use drainage for a time; and, if no good results are obtained, follow it up with resection, which only causes unnecessary delay, and in many cases makes the prognosis bad. The prognosis of any case depends entirely upon the early diagnosis made by the practitioner and the method of treatment adopted by him. In using a hypodermatic needle for diagnostic purposes, sometimes the pus will be too thick to flow through the needle: and in case it fails to appear, if you will unscrew the syringe, leaving the needle inserted, and then push a wire through, upon withdrawing the wire you will find the end covered with pus.

Aspiration.—Absorption can only take place under the most exceptionally favourable circumstances; therefore, in the large majority of cases, treatment by aspiration alone only draws the case along until the patient's vitality sinks too low for resection to save him; and it is from just such cases as these that the opponents of resection gather their statistics.

Incision.—This method of treatment will permit of drainage; but there are always adhering lumps to be found upon the surface of the pleura which no amount of drainage or washing can remove. They must be picked off with the finger.

Resection.—This is by far the best of all methods. We are then enabled to sweep the finger around inside, opening up any pockets, and tear off all adhering lumps and thoroughly cleanse and drain the cavity. In making a resection, if the operator is careful to preserve the periosteum, the rib will grow again. "After making a resection I do not immediately insert a drainage-tube. If a tube is inserted at once, owing to the fact that the movements of respiration will cause the tube to irritate the surfaces, you will cause more or less hæmorrhage. I usually wait three days before inserting it.

"In conclusion, I will say that resection is safe, clean, and easy to perform, and gives by far the best results. I do not, however, approve of the method of resection recently recommended in Germany."—*N. Y. Med. Record.*

Krause on the Transplantation of Large Skin Flaps Without a Pedicle.—James P. Warbasse, in an editorial appearing in the October number of the *Annals of Surgery*, says of this method of transplantation—"The chief thing is that the operation be done aseptically, and that the bleeding on the surface to be covered be completely checked by compression.

"The surface upon which the transplantation is to be done must either be a fresh wound, such as remains after the extirpation of a lupus area or epithelioma, or it must be converted into one. In the latter case, after the wound or ulcer has been cleaned, the limb should be rendered artificially anæmic, and the whole region about the field of operation disinfected, and the granulations vigorously scraped away with a sharp spoon. The whole field should then be washed with sublimate solution, and this washed away with salt solution. After this the wound is thoroughly dried with sterilised gauze. The instruments and hands must also be dry. In every case of granulating wound the ground of the defect should be removed with the knife. The dense fibrous tissue which underlies an old ulcer or granulating surface of long standing should be excised down to fairly normal tissue. It is of no consequence if an excavation results, for, as is known from experience with Thiersch grafting, these hollows soon become lifted up to a level with the surrounding skin. The same procedure is followed in chronic ulcers of the leg. If the underlying tibia is thickened it can be chiselled off level. As a dressing, Krause uses sterile gauze, firmly bandaged over the wound. After the dressing has been applied the tourniquet is removed from the limb.

"The surface from which the skin is to be taken should be disinfected. This must not be done too vigorously. Krause advises against strong scrubbing with brushes. The sublimate solution should be washed away with salt solution, and the skin

thoroughly dried with sterile gauze. The skin should be cut away with the greatest aseptic precautions, and only dry hands and dry instruments employed. The skin of the inner and front sides of the arms and the front of the thighs, and also from the rump, can be used. In order that the defect can be closed immediately by suture, it is well to remove an oval or spindle-shaped piece.

"In order to quickly separate the skin from the subcutaneous fat the whole flap should be cut about with a knife, and then the lower angle of this spindle-form area lifted up with toothed forceps, and with the knife held almost at a right angle to the under skin surface the flap is cut away. When a sufficiently large piece has been cut, in order to avoid any unnecessary manipulating of the wound surface of the flap, it should be folded against the wound surface, and thus held between the fingers. Such detail as this insures a better result.

"The delicate connective tissue layer between the skin and the subcutaneous fat comes away with the flap. When here and there a little fat remains attached to the skin it does no harm.

"The skin patch, which contracts to two-thirds, or less, of its original size, should be placed immediately upon the wound surface, all bleeding from which has in the meantime been checked by compression, or the occasional twisting of a vessel. Ligatures should never be applied, as they act as foreign bodies, and prevent the flap from coming in contact with the surface from which it must receive its nourishment by diffusion. By applying pressure to the flap for a short time it becomes cemented to the floor by a thin layer of coagulum, which holds it when the pressure is removed.

"It is never necessary in the limbs, Krause thinks, to suture the flap to the surrounding tissue. He has used the suture only in one operation—on the upper lip. When possible, the whole defect should be covered with the transplanted patch. The dressing should be applied so that a 5 per cent. sterilised iodoform gauze bandage be bound about the wound, in order to hold the flap firmly in place. Over this should be placed a

moderately firm dressing, and the limb immobilised by a splint.

"The first change of dressing should be done, according to Krause, on the third or fourth day, because vesicles often form and should be opened. In order to prevent the slightest disturbing of the graft, at first only the outer dressings should be removed. The whole limb should then be immersed in boracic solution for an hour or more, until the dressings are soaked loose. On re-applying the dressings, a piece of iodoform gauze thickly covered with boro-vaseline should be placed over the graft. The same care should be employed at all subsequent dressings.

"Krause has observed that these skin grafts do equally well when planted on muscle, fascia, connective tissue, periosteum, dura mater, or directly on a denuded, cortical, or cancellous bone surface.

"Inasmuch as skin from any part can be transplanted by this method, defects in hairy surfaces can be corrected by the transplantation of hair-producing skin.

"After the wound has healed, the new skin becomes movable, and microscopic observation after twenty-two days has demonstrated a thin layer of newly-formed subcutaneous fat."

Operation for Umbilical Hernia on the Newborn Child.—Berger (*Nouvelles Arch. d'Obstét. et de Gynéc.*, June 25th, 1893) successfully operated on a female child thirty hours after birth, and exhibited it afterwards at a meeting of the Obstetrical and Gynæcological Society of Paris. The infant was born strong, breathing well. The umbilical hernia was of the size of a small hen's-egg, and covered by the membranes of the cord. There was a distinct neck or pedicle as thick as a man's forefinger, and made up of integument alone, which was united to the membranes by a deep groove. The lower part of the hernia was reducible, and the sac was there transparent. Coils of small intestine shewed through it; they could all be pushed back into the abdomen. The upper part was irreducible, and in close relation with the vessels of the cord. After birth, the hernia and abdomen were well washed and dressed with

iodoform. On the next day the hernial sac was opened and the small intestine reduced. The irreducible portion consisted of the cæcum, the appendix, and about one-third of the large intestine, all intimately adherent to the membranes of the cord. A layer of these membranes had to be detached and reduced, together with the bowel. This manœuvre could not be done until a free incision had been made along the median line, as in abdominal section. The sac was excised. The peritoneum, the aponeurosis, and the skin were separately sutured. The operation lasted an hour and a quarter. The sutures were removed on the tenth day; recovery was complete at the end of a fortnight. Guéniot, in the discussion on Berger's case, referred to Lindfors' invaluable monograph on "Umbilical Hernia" which appeared last January in Volkmann's *Vortrage*. He said that, as in adults, very minute particulars of each case of this operation in infants would be needed. Nothing differed so much as two umbilical herniæ. Other abdominal viscera besides the intestine may lie in the sac, inseparably adherent, and the abdominal cavity may, by congenital defect, be much too small to hold all the herniated structures.

Orchiaoepexy.—Dr. Jalaquier has performed this operation for testicular ectopy fifteen times in thirteen patients. Ten cases were unilateral inguinal. Two bilateral cases were complicated with hydrocele or hernia. In all these cases there was communication with the peritoneal cavity. The most important point about these cases is the occlusion of the vaginal sheath, not the fixation of the testicle. His results were perfect in twelve patients. The cord always remained somewhat shortened, but the hernia had not been reproduced. The case that failed was in an epileptic child.

Dr. Felizet believed testicular ectopy was a complex lesion, and that clinically the defective position of the organ was of secondary importance. There are two great classes of ectopy, the mobile and the fixed. Each has its own therapeutic indications. When the testicle is movable it is ordinarily normal, and the external orifice of the inguinal ring is enlarged. When it is fixed

the ectopic gland is valueless. It is painful at times, atrophied, and nearly always associated with a hernia, which does not favour the descent of the organ. In these cases the ectopy and the hernia require treatment, and operative interference is always indicated.—*La Cronica Médica*.

PHYSIOLOGICAL AND PATHOLOGICAL CHEMISTRY.

BY C. A. MACMUNN. M.A., M.D., F.C.S.

HONORARY PATHOLOGIST TO THE WOLVERHAMPTON GENERAL HOSPITAL.

Nutritive Value of Alcohol.—F. Strassman (*Pflüger's Archiv*, xlix., 315-330) shews that 90 per cent. of the alcohol taken under ordinary conditions is used in the organism, hence it is a nutritive agent. According to Bödlander, 95 per cent. is used, but Strassman finds the above percentage.

Poisoning by Sulphuretted Hydrogen.—The toxic action of this gas has recently been studied by Pohl (*Archiv exper. Path. Pharm.*, xxii, 1) and by Lehmann (*Arch. Hygiene*, xiv., 135). They state that sodium sulphide is formed, and causes death by paralysing the nerve centres. Lehmann states that oedema of the lungs is also produced. Uschinsky (*Zeit. physiol. Chem.*, xvii., 220-228) contradicts the last statement, and maintains that this gas does not act as a hypnotic. Hence, the theory that sulphonal produces its effects by giving off this gas in the body is erroneous.

Estimation of Hydrochloric Acid in the Contents of the Stomach.—A. Kossler (*Zeits. physiol. Chem.*, xvii., 91-116) has examined the various methods of estimating the above acid in the contents of the stomach. He finds that Hoffman's methods—which consist in estimating, by means of the polarimeter, the amount of inversion produced in a solution of cane sugar, or later, by the hydrolysis of methyl acetate into methyl alcohol and acetic acid—give exact results when applied to the stomach contents, but do not shew how much hydrochloric acid is united to proteid. Winter's method was then studied. In this, three

quantities of the stomach contents are taken. The first is treated with excess of soda, evaporated to dryness, ignited, the chlorine estimated by titration with silver nitrate; the second quantity is evaporated to dryness and kept at 100° C. for an hour, and treated like the first. The difference is supposed to give the amount of *free* HCl. The third portion is immediately ignited and the chlorine estimated. The difference between the second and third gives the amount of HCl united to organic substances and to ammonia. Kossler finds that the values obtained for the free acid and for that united with organic substances are too high, the reason being that during evaporation and incineration HCl is formed from acid phosphates and chlorides of the alkaline earths. Braun's method also gave results too high. Leo's method—which consists in neutralising the free acid with calcium carbonate, the loss of acidity giving the measure of free acid present—gave accurate results, provided the organic acids were first removed by extraction with ether. Sjöqvist's method, when phosphates are present, gives too little HCl.

Microchemical Reactions of Phosphorus in the Tissues.—By L. Lilienfeld and A. Monti (*Zeit. physiol. Chem.*, xvii., 410-424). These observers call attention to the importance of phosphorus in the organism, for not only may it be present in inorganic phosphates but also in organic compounds such as lecithin, protagon, and nuclein. The method of detecting phosphorus microchemically is the following:—

A portion of the *fresh* organ or tissue is placed in a solution of ammonium molybdate and left there for minutes or hours, according as the phosphorus is in a simple or complex union. The specimens which now are coloured yellow if much phosphorus is present are washed with water containing a little pyrogallol, until the liquid no longer takes a brown yellow tint, but remains clear. They are then placed in a 20 per cent. solution of pyrogallol, which reduces the phosphomolybdic acid and causes a yellow, brown, or black colouration according to the amount of phosphorus present. After a few minutes the preparation is again washed and examined with the microscope in

water, or it may be passed through alcohol into xylene, and mounted in balsam.

Sections are taken from the molybdate solution to an ethereal solution of pyrogallol, for by doing so the colouration is less diffuse than when water is used.

In the case of cells the nucleus is deeply coloured, especially the karyomicrosomes, and the optical sections of the nuclear network. The protoplasm is also stained but not so deeply. In cell division the chromatic fibres are most stained, *i.e.*, in the case of vegetable cells. In cells from the testis distinction between nucleus and cell protoplasms is hardly apparent owing to their richness in phosphorus. The effect of this treatment on bacteria, epithelial cells, spermatozoa, blood corpuscles, connective tissues, etc., is then described.

Lactic Acid in Blood and Urine.—T. Irisawa (*Zeit. physiol. Chem.*, xvii., 340-352) finds lactic acid always in the blood removed from the dead body, in the urine of men drawn off shortly before death (in three out of seven cases), in blood corpuscles and pus, in blood drawn from the veins of dogs, and in artificially produced anæmia the amount of lactic acid in the blood rises in proportion to the lessening of the oxidation processes.

Putrefaction in the Intestines.—The estimation of the ethereal hydrogen sulphates excreted in the urine, as is well known, furnishes us with an index to the amount of putrefaction going on in the intestines. Their diminution on a diet of milk or kephir has been ascribed by Rovighi and others to lactic acid. C. Schmitz, however (*Zeits. physiol. Chem.*, xvii., 401-403), attributes this to casein, as feeding dogs on casein produces the same result. He finds that in man forty or fifty drops of a 10 per cent. solution of hydrochloric acid given during the day lessen the output of the ethereal sulphates to the extent of 40 per cent. Biernacki observed the same thing (*Deut. Arch. klin. Med.*, xlix., Heft 1).

Glycogen in Blood.—Huppert (*Chem. Centralbl.*, 1892, ii., 873) finds glycogen constantly present in blood, but in very

small quantities. Ox blood contains from 5 to 10 milligrammes per litre.

Chromic Acid in the Detection of Albumin and Bile Pigments in Urine.—O. Rosenbach (*Deut. med. Woch.*, 1892, No. 17) finds that when a few drops of a 5 per cent. solution of chromic acid are added to a feebly acidified urine, the albumin is precipitated in flocks, even if present in small quantity. Phosphates and urates do not interfere with this test. If bile pigments are present, the urine assumes an intense green colour with this test, but the fluid must be added drop by drop with constant agitation, or the liquid will turn brownish-red; and this precaution is even more necessary when the amount of bile pigments is large.

A Crystalline Globulin occurring in Human Urine.—D. Noel Paton, in *Proc. Roy. Soc. Edin.*, xix., 102-115.

Estimation of Urea.—W. Colquhoun, in *Chem. News*, lxxvii., 123.

Origin of Fat from Proteïd in the Body—E. P. Pflüger (*Pflüger's Archiv*, li., 229-320). From the consideration of experiments on metabolic exchange, from the relation of the proportion of fat in milk to that in the blood, from the occurrence of fatty degeneration, the formation of adipocere after death, Pflüger concludes that fat can undoubtedly arise from proteïd. In another paper (*ibid.*, lii., 239-322) he shews that in many cases the decomposition of proteïd will not account for the newly-formed fat, if only starch or starch and flesh are given in the food. Body fat is only formed if a nutritive excess of carbohydrates is present. If this is not the case the body is overladen with carbohydrates not fat. Fat is not formed with great excess of proteïd food if carbohydrate is not given at the same time. After feeding on flesh and starch, or an ordinary mixed diet, the amount of newly formed fat does not depend on the quantity of proteïd which undergoes metabolism, but on the excess of carbohydrate. By feeding on carbohydrate alone, fat is seldom formed.

Method of estimating the Volume of the Corpuscles of Blood.—M. Bleibtreu and L. Bleibtreu in *Pflüger's Archiv*, li., 151-228,

and O. Lange in *ibid.*, lii., 427-455. From data obtained as described in these papers the *volume* and *amount of proteïd in a single red corpuscle* can be calculated, if the methods be combined with hæmocyto-metric observations. As a matter of curiosity, if for no other reason, we give some of the results obtained by H. Wendelstadt and L. Bleibtreu (*ibid.*, lii., 323-356):—Volume of a single red corpuscle in horse = 0.00000003858 cc., in a pig = 0.00000004350 cc. Amount of proteïd in ditto of horse = 0.000000018023 mgm., in ditto of pig = 0.00000001928 mgm.

Exudations and Transudations.—A. Bernheim (*Virchow's Archiv*, cxxxi., 274-303) gives the results of analysis of various dropsical fluids; the specific gravity and percentage of proteïd being specially noted. An approximation to the percentage of proteïd (E) can be obtained from the sp. grav. (S) by the following formula, $E = \frac{2}{3} (S - 1000) - 2.8$. In the case of exudations (inflammatory fluids) the result is not so correct as in that of transudations (pressure dropsies). Mere chemical analysis, although valuable as part of a chain of evidence, is not by itself sufficient for a correct diagnosis of the variety or cause of the dropsy under investigation.

The Haycraft-Herrmann Method of Estimating Uric Acid in Urine.—According to E. Deroide (*Bull. Soc. Chim.* [3] vii., 363-364) the too high results obtained by the above method are not due to the want of constancy in composition of the precipitate of silver urate, but to the simultaneous precipitation of silver compounds of the xanthine group insoluble in ammonia.

Estimation of Uric Acid.—F. G. Hopkins (*Proc. Roy. Soc.*, lii., 93-99, and *Chem. News.*, lxvi., 106) describes a simple method of estimating uric acid in urine. The urine is saturated with solid ammonium chloride (about 30 grams to 100 cc.); the urates are precipitated in this way as ammonium urate, which is collected, treated with hydrochloric acid, and the uric acid which separates out may then be estimated by any of the usual methods. It is shewn that this method is not only simpler and more rapid than others in use, but is as accurate as the standard Salkowski-Ludwig method.

Ptomaines.—An important paper, by Garcia, is published in *Zeit. physiol. Chem.*, xvii, 543-595.

Urobilin.—A. Eichholz has (*Jl. Physiol.*, xiv, 326-339) isolated, by Méhu's method, the urobilin from normal and pathological urine. He finds that there *are* differences between normal and pathological urobilin. [This the reporter has all along insisted upon, although some German observers have tried to prove that such differences do not exist. These pigments differ in some slight respects from similar ones isolated by the lead method, which perhaps can be explained on the supposition that their chromogens unite with certain salts and acids as is known to be the case with other pigments.]

β-Hydroxybutyric Acid in the Organism.—This acid has been supposed by some to be the cause of diabetic coma. According to T. Araki (*Zeit. physiol. Chem.*, xviii, 1-12), when administered to rabbits, dogs, and frogs their urine gives the reactions of acetone and diacetic acid, if oxidation processes in the organism are diminished simultaneously by carbonic oxide poisoning. This result supports Minkowski's theory (*Arch. exp. Path. Pharm.*, xviii., 42), that these substances in diabetic urine originate from the above acid.

Proteïd Reactions.—See J. W. Pickering in *Jl. Physiol.*, xiv., 347-382.

Hæmatoporphyrinuria.—Dr. A. E. Garrod has a paper on this subject in *Jl. Physiol.*, xv., 108-118, in continuation of his previous researches. In it he confirms the statement of the Reporter that hæmatoporphyrin may sometimes exist as a chromogen: perhaps as the "urobilinoidin" of le Nobel. In some cases Dr. Garrod found a body which appears to be a precursor of hæmatoporphyrin whose absorption bands are similar to those of oxyhæmoglobin, and which appears to be identical with the substance obtained when hæmatoporphyrin is treated with zinc chloride and ammonia. There are many other interesting facts observed for which the paper referred to may be consulted. A very elaborate paper on this and kindred subjects by Dr. L. Zoga (in Italian) appeared in the *Archivio Italiano*

di Clinica Medica for 1893. It is illustrated by several charts of spectra ; and a paper on the connexion between hæmatoporphyria and sulphonal (poisoning) is published in Vol. xxi. of *St. Thomas's Hospital Reports*, by Dr. Percy Smith.

Hüfner's Method of estimating Urea.—See W. Camerer in *Zeit. Biol.*, xxix., 239-246. He points out that the method, with certain precautions, is accurate enough for all purposes.

Chlorophyll excreted through the skin of the Horse.—Although of no direct bearing on medicine, attention may be called to the curious fact just discovered by Vet.-Captain F. Smith, of Aldershot (*Jl. Physiol.*, xv, 162-166), that the "dandruff" of the horse contains a pigment which is "modified" chlorophyll, derived from the food of the animal. By careful observation its increase and decrease, as observed with the spectroscope, were found to be dependent on the nature of the food. So that, in addition to the well-known fact that the horse sweats albumen, we now learn that it excretes the colouring matter of its food through the skin.

REPORTS OF SOCIETIES.

BRITISH MEDICAL ASSOCIATION.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

PATHOLOGICAL AND CLINICAL SECTION.

The second meeting of the Session was held in the Medical Institute on Friday, November 24th. The Chairman, Mr. BENNETT MAY, presided.

Excision of Wrist.—Mr. Morrison shewed a young girl, aged 15, whose left wrist-joint he had excised two and a half years ago for tubercular disease of the carpus and metacarpus. The operation was performed through a longitudinal dorsal incision,

supplemented by an anterior incision for drainage, and resulted in complete cure of the local disease and an excellent hand, the strength and mobility of the fingers being very satisfactory.

Herpes Facialis.—Dr. Leslie Phillips shewed a patient who had presented at each menstrual epoch, for twelve months, a severe attack of herpes labialis seu facialis, symmetrically placed in the region of the cheeks, chin, and lips. Each attack was accompanied with migraine.

Dry Gangrene of Hand.—Mr. F. Marsh shewed a boy æt 13, with dry gangrene of the whole of the ring and little fingers, of the tips of the two other fingers and thumb, and of the skin over the thenar and hypothenar eminences of the left hand. Three months ago his left arm, at a point two inches above the wrist joint, was caught between the blades of a pair of heavy metal shears, and two wounds were inflicted, the one, over the inner and posterior surface of the ulna, almost dividing the bone; the other, over the outer and anterior surface of the radius, involving the skin only. There was but little bleeding from the wounds, which were sutured up and healed readily. The hand from the first was cold and numb. When admitted into the Queen's Hospital twelve days after the injury, the hand was anæsthetic, and the tips of all the fingers were dry, black, and shrivelled. Pulsation in the ulnar and radial arteries ceased abruptly at the level of the injury. The gangrenous process slowly extended until it reached the dimensions stated above, and even now no distinct line of demarcation had formed in the case of the thumb and the two adjacent fingers. The interesting points in the case were (1) the comparative rarity of dry traumatic gangrene of the hand, especially in young people, and (2) the method of the causation of the gangrene. It seemed probable that, by the sudden violent compression of the arm by the heavy blades of the shears, the middle and inner coats of the ulnar and radial arteries and possibly of the interosseous, had been divided, and that the main nerve trunks, especially the ulnar, had been contused to an extent almost equivalent to division.

Talipes.—Mr. Edward Freer shewed the following case:—William Gordon Eddy, aged 4, Trevanno, Cornwall, healthy child, no convulsions. Mother remembers being struck by the appearance of a young man whose foot “turned in.” This was about the third month. She had a fall in the yard. Operated on when *six weeks old*, three operations at the same time, one *on the outer side*, put up in starch case and kept for three months till it dropped off. No massage or manipulations, condition afterwards bad as before, simple side instrument applied.

Came on September 6th. Right talipes equino-varus and cavus congenital, walks on outer side of foot, thickening over head of fifth metatarsus from pressure. Leg an inch and a half less than left in circumference at calf and three-eighths of an inch shorter, slight obliquity of leg from patella to middle of ankle. T. anticus and posticus and T. Achillis contracted, scars over peronei and T. Achillis.

September 12th. T. anticus and posticus plantar fascia and deltoid ligament divided. Scarpa applied. Manipulations and massage daily.

October 16th. Varus and cavus corrected. T. Achillis divided. Instrument re applied. Massage to outer muscles and manipulations continued daily.

November 5th. Foot perfectly flat, less than a right angle. Some thigh and leg eversion still remain. Instrument with boot divided at heel applied with elastic ring attached to boots on sole and heel portion. Massage manipulations continued daily to present time.

Excision of Wrist.—Mr. Haslam shewed a patient, aged 18, whose wrist he excised for extensive tubercular disease last April. The case at that time seemed most unpromising for any treatment short of amputation, as the hand was riddled with sinuses, and suppuration had been going on for nearly twelve months. The joint was excised by a median dorsal incision, and the sinuses freely scraped. It was necessary on four subsequent occasions to scrape out tubercular patches, but healing was complete by October, and he now has a hand that will be of some service to him.

“*Contre-coup*.”—Professor Allen read a note on the mechanism of cerebral injuries by “*contre-coup*,” which is published elsewhere.

Specimens.—Dr. Stanley shewed the following specimens for Dr. Simon :—1. Liver and pancreas of a patient, male, age 52, admitted under his care in August last complaining of jaundice, polyuria, and emaciation. A large quantity of sugar was found on examination. He stated distinctly that the jaundice was the first thing he noticed, and that after this had lasted for about three weeks, he found he was passing a larger amount of water than usual. The patient died cachectic, and *post mortem* the gall bladder was found greatly distended with bile, and projecting down beyond the margin of the liver. The pancreas was extremely dense and its duct distended, forming a series of cysts. The common bile duct passed through the head of the pancreas, and was completely obstructed. Microscopic examination shewed that the whole pancreas was converted into a mass of scirrhus. The pancreatic duct contained some opalescent fluid which gave no pancreatic reactions. The case was evidently one of pancreatic diabetes, due to the destruction of that organ. There was secondary growth in the lungs. 2. Lung shewing at the root a dense collar of carcinomatous growth, surrounding the left main branches and extending from these into the lung. The seat of origin was apparently in the bronchial glands. There were a large number of small secondary nodules in the liver, and one in the pancreas. The alimentary canal was free.

Cancer of Pancreas.—Dr. Kauffmann shewed a case of cancer of pancreas with secondary deposits in liver and lungs. The remarkable points are—the patient was not greatly emaciated when admitted, and insisted that he had suffered no discomfort until five weeks before admission. He was thin, but not markedly so. He presented an abdominal tumour, irregular and hard, pulsating, and over part of its area a systolic bellows-murmur. There was no pain or tenderness on pressure. He failed rapidly and died of marasmus five weeks after admission.

He had neither diarrhoea nor putty stools; neither pain nor tenderness; neither glycosuria nor jaundice.

Vesical Calculi—Mr. Heaton shewed three urinary calculi removed by the suprapubic operation, at the Children's Hospital, from patients aged 4, 2, and $1\frac{1}{2}$ years. The largest of the three calculi was dumb-bell shaped, and lay encysted in a saccule of the bladder of a child aged 18 months. It was necessary to partially invaginate the bladder through the wound and peel it off the stone before it could be extracted. All the children made good recoveries.

Gastric Ulcer; sub-diaphragmatic and pleural abscesses.—Dr. Codd shewed the specimen for Dr. Malet.

E. B., aged 21, admitted October 21st. Had dyspeptic symptoms with occasional vomiting, palpitation, and dyspnoea on exertion, for a fortnight before admission.

On admission, had severe pain and tenderness over abdomen, independently of food. Tenderness persistent until October 27th, but both before and after that date her evening temperature averaged 101 or 102°.

On November 2nd signs of fluid were detected at right base, which was explored with negative result. Later, began to have profound nausea, and on the 12th, and again on the 15th, she spat up large quantities of very foetid purulent fluid. On the 16th several explorations were made over the dull area under an anæsthetic, and on the eighth or ninth puncture pus was withdrawn and an incision made and $8\frac{1}{2}$ oz. of foetid blood-stained pus evacuated. On the next morning she was dressed without difficulty; but the day after, on being turned over on to her sound side for this purpose, suddenly became collapsed and cyanosed and quite moribund. She was restored by oxygen inhalation and hypodermic stimulants, and in about three hours had sufficiently rallied to do without them and continued in comparative comfort for twenty-four hours, when she gradually became worse and died.

Autopsy.—There were some old adhesions between the stomach and liver. The right pleural cavity is divided into two

parts by a horizontal septum. The upper cavity is lined with recent coagulated lymph, the lower with old sloughy material. There is an abscess cavity with more marked sloughy walls between the diaphragm and the upper and posterior surface of the liver. The incision opens directly into this sub-diaphragmatic cavity and the upper end of the incision into the lower pleural cavity. Right lung completely collapsed, with its base adherent to the diaphragm, and there is a free communication between the sub-diaphragmatic cavity and a large bronchus, capsule of Glisson stained where it forms part of the wall of abscess cavity, but no inflammation penetrates into hepatic substance. Left lung very cedematous with broncho-pneumonic patches. In the posterior wall of the stomach is a large deep old ulcer ($2\frac{1}{2}$ in. $\times$ $1\frac{1}{4}$ in.) which has cicatrized over, but its floor does not appear to contain any stomach substance. The upper half-inch of the floor is on the liver and the remaining two inches on the pancreas. The lesser sac is apparently obliterated, but there does not appear to be any other trace of connexion between the process in the gastric mucosa and that under the diaphragm or in the pleural cavity.

MIDLAND MEDICAL SOCIETY.

The second ordinary meeting of the Midland Medical Society was held on Wednesday evening, November 22nd, the President, Dr. A. H. EVANS, in the chair.

Mr. Lawson Tait shewed—

(1) A uterus removed, by vaginal hysterectomy, from a woman in whom removal of the uterine appendages some nine months previously, for double pyosalpynx, had failed to give relief. The operation was successful, and the patient practically cured

(2) A uterus, with large multiple fibro-myomata, removed during the third month of pregnancy by a modified Porro's operation. The tumours blocked the pelvis, and made it certain that normal delivery would be impossible. The patient made a good recovery.

(3) A specimen from a case of interstitial pregnancy, which proved fatal from rupture and intra-abdominal hæmorrhage.

Mr. L. Freer shewed a boy the subject of relapsing talipes equino-varus of the right foot, which he had cured by multiple tenotomies.

Acute Appendicitis.—Mr. Barling shewed a stenosed and inflamed appendix which he had removed from a patient of Dr. Simon's, and which had set up a fatal suppurative peritonitis. The patient, a girl aged 14, was admitted to the General Hospital November 3rd, 1893, with acute abdominal pain, with a tense rigid abdomen, fixed at the lower part, and an anxious face. The illness had commenced ten days before with diarrhoea, which persisted until admission; and one day there was vomiting. Pain was referred to the umbilicus chiefly. Both iliac fossæ were tender, but no tumour could be felt. There was some high-pitched resonance in the region of the cæcum. The urine had to be drawn off by catheter. Temperature 101, pulse 120. The patient was menstruating for the first time. A history of a similar attack some months earlier was obtained.

November 4th. Condition generally much the same; no vomiting. Evening temperature 102.5, pulse 124. Examining under chloroform, a distinct thickening was felt in the right iliac fossa, and an incision directly over this, after opening the general peritoneal cavity, discovered matting of the cæcum and ileum, with hyperæmia around and some small patches of lymph. In the middle of the thickened tissues an abscess, holding about half an ounce of foetid pus was found, and the appendix was removed from the middle of this. The cavity was packed and drained. For two days the patient appeared to be on the road to rapid recovery, but then her face became pinched, the pulse quick, though it was never hard, and the patient became delirious, and she died on the fourth day after operation. Subsequent to the removal of the appendix there was neither vomiting, distension, nor rigidity of the abdomen, and death was attributed to septicæmia. At the autopsy, however, purulent peritonitis was found.

Examination of the cæcum shewed that it was healthy. The appendix at its distal part was much thickened, but did not contain either fluid or concretion. About an inch from its end it was completely stenosed, doubtless from the previous attack.

Mr. Barling also shewed another specimen of acute appendicitis, with perforation by a fæcal concretion. The specimen was taken from a young man who was admitted to hospital with severe purulent peritonitis. There was no cause evident; and though the abdomen was drained and washed out, the patient died three days later.

What made the case unusually interesting was that six months previously the patient had been operated on by Mr. Barling for peritonitis, the cause of which could not be discovered, and apparent complete restoration to health had resulted, the cæcal region being free from thickening. At the autopsy a recent perforation of the appendix by a fæcal concretion was discovered and old adhesions from some previous inflammation. A second fæcal concretion was found free in the appendix. The cæcum was healthy, though there were adhesions around it, and its communication with the appendix was patent.

Fibrosis of the Lung.—Dr. Foxwell exhibited two specimens of fibrosis of the lung. In the first, the patient, a needle grinder, had exhibited symptoms of dyspnœa with purulent bronchitis for two years. The lung had a moderately, but universally thickened pleura. On section, throughout its whole extent, were deeply-stained nodules the size of millet seeds, which to the touch were of cartilaginous hardness, and under the microscope shewed almost secluded bronchioles with much fibroid peribronchial thickening.

The other lung was from a man who died from a great dilatation of all four cardiac cavities due to syphilitic myocarditis. The pleura in this case was immensely thickened and had contracted down upon the lung, reducing this to about one-half its normal size. On section the lung was uniformly dense and tough in consistence, with a general dilatation of the bronchi. There was much increase of fibroid tissue throughout the lung,

but not special peribronchial development ; nor were there any foci of abnormal pigmentation.

Mr. Lawson Tait then read his paper on a General Summary of Conclusions from his Entire Experience in Abdominal and Pelvic Surgery.—about 4,000 cases.

An ordinary meeting of the Midland Medical Society was held on Wednesday evening, December 6th, 1893, Mr. HENRY EALES, Ex-president, in the chair.

Hereditary Chorea.—Dr. Russell shewed two cases of hereditary chorea.

Specimens.—Mr. Christopher Martin shewed two specimens of ruptured tubal pregnancy. The first was from a woman, aged 26, who had had amenorrhœa for six weeks. On October 19th she was seized with violent pain in the left side of the lower abdomen, with faintness, pallor, and collapse. On opening the abdomen, a large quantity of blood was evacuated. The right Fallopian tube was felt to be ruptured. It was drawn into the wound, ligatured, and removed. The specimen shewed a right Fallopian tube, enlarged by a five or six weeks' pregnancy, which had ruptured on its superior surface. There was no trace of a foetus. The right ovary was cystic.

The second specimen had a similar history of six weeks' amenorrhœa, followed by sudden abdominal pain and faintness. On operating, the abdominal cavity was found full of blood. Mr. Martin removed the left Fallopian tube, which had ruptured, washed out the abdomen, and drained it. The patient made, as in the other case, an excellent recovery. The Fallopian tube shewed a rupture in its free surface, from which chromic tissue protruded.

Sarcoma—Dr. Short read the notes of a case of multiple sarcoma of the subcutaneous tissues secondary to a growth in the left iliac fossa. The patient was an old lady aged 71 years, who developed a tumour in the left iliac region, followed by small nodules under the skin of the abdomen. These nodules

were at first no larger than a small shot; they grew rapidly, and some were as large as a small nut at the time of death. Those on the abdominal wall were followed by similar growths in the back and limbs. The skin over them became bluish from small venules, but no ulceration occurred. The primary growths appeared to involve the whole of the left iliac fossa and the side of the pelvis, but did not entirely obstruct the large gut. From time to time she suffered from constipation, with a rise of temperature, relieved by castor oil. She died about six months after the growths were first noticed. One of the subcutaneous nodules had been removed, and sections, made by Dr. Douglas Stanley, shewed the growth to be a round-celled sarcoma, without excess of pigment.

Specimens.—Mr. F. Marsh shewed two specimens—(1) A large cartilaginous “loose body” which he had removed from the knee joint, and (2) a large mass of myxomatous polypi removed from the nose by means of the snare.

Paper.—Dr. Arthur Foxwell then read a paper on “Hæmoptysis.”

INTERNATIONAL MEDICAL CONGRESS.

ROME, MARCH 29th–APRIL 5th, 1894.

We have received from Professor E. Maragliano, M.D., Secretary-General to the Eleventh International Medical Congress, the following particulars with regard to the forthcoming meeting at Rome, which, it will be remembered, was unavoidably postponed from August, 1893, until March, 1894:—

In consequence of the adjournment of the Congress, Articles 1 and 11 of the Statute have been altered as follows:—

Art. 1.—The Eleventh International Medical Congress will be inaugurated in Rome on the 29th of March, 1894, and will close on the following 5th of April.

Art. 11.—Papers to be read before the Congress should be announced not later than the 31st of January, 1894. The title

should be accompanied by a very short précis of the paper, and by the conclusions. The latter will be printed by the Board and distributed among the members.

Papers announced after the 31st of August, 1893, will be marked in the provisional programme with an asterisk.

The provisional programme will contain also those previously announced papers which have been published in scientific papers after the adjournment.

The railway companies have agreed that the reduction of fares shall be available from the 1st of March till the 30th of April, 1894.

The Travelling Tickets of Membership and Railway Passes will be sent by the Secretary-General's Office to each member enrolled before the 14th of February, 1894. After this date the said papers should be applied for to the following gentlemen :—

Austria	...	Professor H. Nothnagel, Vienna
Belgium	...	„ Thiry, Bruxelles
Bulgaria	...	Dr. A. Puscoullieff, Sophia
Denmark	...	Professor C. Lange, Copenhagen
Egypt	...	Dr. Hassan Pacha Mahmoud, Cairo
„	...	„ Onofrio Abbate Pacha, „
France	...	„ Marcel Baudoin, Paris
Germany	...	„ Carl Posner, Berlin
Great Britain	„	G. H. Makins, London
„	„	G. A. Gibson, Edinburgh
„	„	Professor Sir William Stokes, Dublin
Luxemburg		Dr. Paul Koch, Luxemburg
Malta	...	„ G. O. Galea, La Valletta
Norway	...	Professor S. Laache, Christiania
Netherlands	„	B. I. Stokvis, Amsterdam
Poland	..	„ Cybulski, Krakau
Portugal	...	„ J. T. de Sousa Martins, Lisbon
Roumania	...	Dr. C. D. Severeanu, Bucarest
Russia	...	Professor V. Pachoutine, St. Petersburg
Servia	...	Dr. V. Subboticz, Belgrad

Spain	...	Professor J. Calleja y Sanchez, Madrid
"	...	Dr. A. Espina y Capo, "
Sweden	...	Professor F. Holmgren, Upsala
Switzerland	"	Th. Kocher, Bern
"	"	D'Espine, Geneva
Turkey	...	Dr. van Millingen, Constantinople
"	...	" H. Perera, Salonik
Hungary	...	" L. Csàtary de Csàtár, Budapest
Tunis	...	" G. Funaro, Tunis

The first edition of the Provisional Programme will shortly be printed, and will contain details concerning the Congress and a list of all the papers announced up to November 15th, 1893.

Attention is drawn to the following Articles of the Statute:—

Art. 2.—All physicians are permitted to take part in the work of the Congress, provided they have satisfied the conditions of inscription and obtained the required ticket of membership.

Art. 3.—The doctors of other sciences who, from their special studies, may have an interest in the work of the Congress, may be admitted to the duties and rights of the members of the Congress who are doctors of medicine, being entitled to share in the work either by reading papers or by taking part in the discussion.

Art. 4.—The admission fee to the Congress is fixed at twenty-five francs (£1 sterling). It entitles to a copy of the report of the Congress, which will be forwarded to the members as soon as it is published.

Art. 17.—The persons who, not being comprised in Article 3, are interested in the work of a section, may obtain admission by consent of the President of the Congress.

Such persons will receive a special ticket and will pay the admission fee like the other members, being entitled, however, to a copy of the Report of the Congress

The persons thus admitted to the Congress may speak neither in the general sittings nor in the sittings of the sections to which they are not enrolled.

Art. 18. —The students of medicine may be invited or admitted by the President to attend the sittings, but only as hearers.

They must obtain a special ticket, which will be granted them without payment.

Members may apply to the Secretary-General's Office for Railway Passes for their wives and adult members of their families. The latter may be enrolled on payment of a fee of *ten francs*.

Medical gentlemen and all persons who wish to take part in the Congress are requested to give their names as soon as possible, in writing, to the Secretary-General to the Eleventh International Medical Congress, Genoa.

Fees should be paid by postal order or draft to the order of the treasurer, Professor L. Pagliani, M.D., Director-General to the Office of Public Health, Home Department, Rome.

REVIEWS.

CANCER, SARCOMA, AND OTHER MORBID GROWTHS.*

THIS little volume of about a hundred pages treats of the cell-inclusions found in the carcinomata, and (according to the author) in sarcomata and other morbid growths. The first twenty-four pages are devoted to a brief account of the opinions of other workers in this special field. The conclusions arrived at by French and German observers are considered, as also are the recent papers by Walker and Ruffer and Ruffer and Plimmer in this country.

The author next describes and figures the intra-cellular bodies found in cancer. The characteristic appearance of these is now so well-known, thanks to the beautiful drawings

* Cancer, Sarcoma, and other Morbid Growths, considered in relation to the Sporozoa. By J. Jackson Clarke, M.B. Lond., F.R.C.S.

published in the *Journal of Pathology*, that it is easy to identify them in well-stained sections of carcinoma. But the real nature and significance of these singular bodies is certainly not yet understood. It is, therefore, somewhat surprising that the author has no hesitation in naming these bodies "Sporozoa," and feels called upon to criticise severely the cautious timidity of Messrs. Ruffer and Plimmer, who use "the vague term Protozoa." Later, he justifies his own more dogmatic statements by drawings shewing the formation of "swarm spores." He states that in sections of epithelioma the process may be seen to take place. Large round or irregular shaped cells, staining deeply with carmine or fuchsine, are found in abundance in and near the cell-nests. Nucleus and nucleolus are distinct in some, but in others, the "ripe parasites," the central part is entirely occupied by a reticular mass. This mass breaks up into a multitude of reticular spores, which are amœboid, and find their way into epithelial cells and connective tissue, thus extending the disease.

But is not this going a little too fast? In carcinomata one often sees cells stuffed with small, deeply-stained bodies of irregular shape; but does it follow that these are "spores," or even that they result from the division of a parasite? Leucocytes enter the cancer-cells in great numbers, especially towards the margin of an alveolus, and cause very puzzling appearances. Ruffer and Plimmer state that the leucocytes are particularly attracted by cells containing parasites, penetrating not only the host-cell, but lodging within the parasite itself. They figure four leucocytes thus placed, which appear to have destroyed the parasitic organism. Is it not likely that some such appearances constitute the "swarm-pores" of the author and other observers?

When, at the end of the work, the organism supposed to be characteristic of cancer, is described as present in sarcoma and even adenoma, it becomes clear that a timid over-cautious interpretation of phenomena is not one of the faults of the book.

SCIATICA.*

THIS is a work of the right kind, based on the clinical observation and analysis of numerous cases of the disease on which the author presumes to speak. It is noteworthy that of the 68 cases analysed no fewer than 38 were rheumatic and 12 gouty. This predominance of rheumatism over gout in the production of sciatica is in accordance with our experience. Dr. Eccles finds it more prevalent in females than males, and most commonly excited by exposure to cold and damp. He accepts Winternitz's view that the application of cold to the surface gives rise to collateral hyperæmia of the deeper structures, but he admits the effect in other cases of agencies which operate directly on the nerve.

He distinguishes between neuralgia, peri-neuritis, and neuritis, and thinks that a differential diagnosis may be made, but in this he is not very clear. Neuralgia is usually due to cold, is associated with neuralgia in other nerves, is intermittent and not associated with vasomotor disturbance or atrophy of muscles; peri-neuritis gives rise to great local tenderness, and to pain on movement; the pain is burning in character, is increased at night; while extension of the leg by kicking forwards causes a sharp shock running up as well as down the affected leg. Neuritis supervenes on peri-neuritis, and has, in addition to the already described symptoms, muscular paresis, atrophy, reaction of degeneration, anæsthesia, hyperæsthesia, paralgia and formication.

For treatment he recommends in all cases, at first, rest for a few days, warmth to the limb, warm rooms, and in this last respect he inveighs against cold water-closets and cold polished wooden seats, recommending that the latter should be covered with felt or woollen material. He allows good diet, and alcohol in moderation, with copious draughts of hot or mineral water. He does not think highly of drugs, but the iodide and bromide of sodium and salicylate of soda are recommended. Locally, he

* Sciatica : A record of Clinical Observations on the Causes, Nature, and Treatment of Sixty-eight Cases. By A. Simon Eccles, M.B. Aberd. London : Macmillan and Co. 1893.

recommends massage, which he describes with some minuteness, and certain gymnastic performances; also galvanisation of the affected nerve. There is a good deal of detailed information which it is impossible to summarise, respecting the methods employed by the author for the local treatment of these cases and for which we must refer the reader to the book itself.

SYPHILIS.*

MR. EDWARD COTTERELL has written a brief tract in praise of the treatment of this disease by means of intramuscular injections of soluble salts of mercury, condemning at the same time the subcutaneous use of insoluble mercurials. He refers in detail to two formulæ only, viz.:—Bloxham's solution of sal alembroth and Schwimmer's solution of soziodol of mercury in potassium iodide, the latter of which he prefers. The pamphlet embodies the generally adopted views with regard to the treatment of syphilis, the only novelty being the author's suggestion, which has been carried out by Messrs. Burroughs and Wellcome, of having tabloids made to allow of the preparation of the solution when wanted.

Is it not a little unduly stretching language to say that treatment by the inunction method necessitates the patient "devoting two or three hours a day to treatment?" We must demur, too, to the statement that Bloxham's solution of sublimate causes "little or no pain," for this does not agree with the opinion very frequently expressed by patients. We have noticed that for some reason foreigners, Gernans, Spaniards, and Frenchmen, are much more willing to submit to, and to persevere with intramuscular injections of mercury, whether of Bloxham's solution, or hydrargyrum peptonatum (Paal) than are our compatriots.

* Syphilis: Its Treatment by Intramuscular Injections of Soluble Mercurial Salts. By Edward Cotterell. F.R.C.S. 1893.

MANUAL OF THE DISEASES PECULIAR TO WOMEN.*

It is difficult to say anything in praise of this book. The author states in the preface that "the manual is intended to meet the requirements of the general practitioner in his every-day work." In spite of this the first chapter is taken up by a philosophical discussion on the differences, mental, moral, and physical, between man and woman; another chapter by discussion "on the evidence of a uterine nerve-centre in the medulla oblongata;" and all this to the exclusion of matters which we should consider essential requirements of the general practitioner. Thus we can find no reference whatever in the book to tents.

We find a manifest inaccuracy on page 13: "Less frequently we find the uterus well developed, but no semblance of a vaginal canal, and this condition of affairs may result in the production of hæmato-kolpos (hæmatometra);" as though the two words were synonymous.

The author's opinions differ in many cases from those generally accepted. We will quote a few instances only. On page 74, writing of hydatid mole, he says: "The size of the uterus may correspond fairly well with that of the supposed duration of the pregnancy, or it may be slightly larger," whereas the generally received opinion is that a rapid increase in the size of the uterus out of proportion to the date of the pregnancy is one of the distinguishing signs of this condition. Of the symptoms of chronic metritis he says: "These are ill defined, there is generally a diminution in the amount of the menstrual discharge," which is exactly the opposite of what most Gynæcologists appear to have observed. After reading the book through one wonders why it was ever written, as there are already so many excellent manuals on diseases of women in existence.

* Manual of the Diseases Peuliar to Women. By James Oliver, M.D. Edin. &c.; Physician to the Hospital for Women. London: J. and A. Churchill.

THE STUDENTS' HAND BOOK OF GYNÆCOLOGY.*

THIS small book of 178 pages, to which no author's name is prefixed, is the best book of the kind we have seen. Although concise, nothing of importance is omitted, and the arrangement of the subject-matter is excellent. The illustrations are recent, many of them being taken from Pozzi's lately published work; and it is printed in large type on good paper.

It seems to us, however, that such a book as this, being a summary of the subject, is better adapted as a "rub up" after studying the larger works than as an aid to the commencement of the study of diseases of women.

SANITARY WORK IN THE SMALLER TOWNS
AND VILLAGES.†

THERE can be no better proof of the hold that sanitary science is taking on all classes of the community than the production of a book like this.

In his preface the author says: "In the following pages I have offered no opinion upon what may or may not be injurious to health. My own remarks have reference only to those *constructive* works which the Medical Officers of Health approve as tending to prevent illness."

There appears to be no particular order or arrangement in the book, the first section dealing with Pigsties, and this being followed by sections on Privies and Cesspools, Bad Air in Houses, Dirty Houses, Dampness of Houses, Storage of Rain-water, and Contamination of Well-water.

It will, however, serve a useful purpose if, by virtue of its conciseness, it appeals to that class of people who would look with horror on a larger and more scientific treatise.

* The Students' Hand-book of Gynæcology. Specially designed to assist those commencing the study of diseases of women. Illustrated with forty-nine engravings. Edinburgh: E. and S. Livingstone.

† Sanitary Work in the Smaller Towns and Villages. By Charles Slagg, Assoc. M. Inst. C.E. London: Crosby, Lockwood, and Son.

PUBLISHERS' DEPARTMENT.

New Inventions, Drugs, etc.

We have received from Messrs. Burroughs, Wellcome, and Co., tabloids of the following drugs:—

Dermatol.—The claim is made for this drug that it is an efficient substitute for iodoform in the treatment of wounds, being at the same time inodorous and free from poisonous qualities. We have seen many favourable reports in the medical journals of its efficacy.

Alumnol.—This is a sulphonic-acid salt of aluminium, which possesses considerable astringent power. It has been used locally with success, both in cases of acute and chronic inflammation of the skin, and for discharges from various mucous surfaces. It is said to be especially valuable in the treatment of gonorrhœa.

Iodopyrin is a modification of antipyrin, in which one atom of hydrogen is replaced by one of iodine. It is supposed to combine the actions of the two drugs; but there appears to be some doubt whether the iodine element materially affects the results produced.

Benzosol is a combination of benzoic acid and guaiacol, which is split up in the intestine into its two constituents. Guaiacol appears to possess all the important elements of creasote, and, when given in this form, the unpleasant taste and after-effects inseparable from that drug are avoided. There is a considerable amount of evidence to shew that this preparation has a distinctly beneficial action in cases of phthisis.

Hypnal is a compound of chloral hydrate and antipyrin, and is recommended as a safe and pleasant hypnotic.

Agathin appears to be a useful drug for pain of nervous origin, especially that of sciatica; and we should be inclined to give it a trial in such disorders.

New Books, etc.. Received.

- The Hygienic Prevention of Consumption. By J. EDWARD SQUIRE, M.D., M.R.C.P. Physician to the North London Hospital for Consumption and Diseases of the Chest. London : Charles Griffin and Co 1893.
- Diseases of the Skin. By MALCOLM MORRIS, Surgeon to the Skin Department, St. Mary's Hospital, London. London, Paris, and Melbourne : Cassell and Company Limited.
- A Practical Hand-book of Midwifery. By FRANCIS W. NICOL HAULTAIN, M.D., F.R.C.P.E., Lecturer on Midwifery, Edinburgh School of Medicine; Obstetrician, Royal Public Dispensary, Edinburgh. London : The Scientific Press Limited.
- A Guide to the Public Medical Services. By ALEXANDER S. FAULKNER, Surgeon-Major, Indian Medical Service. London : H. K. Lewis.
- The Pneumatic Cabinet in the Treatment of Pulmonary Phthisis. By C. E. QUIMBY, A.M., M.D.
- Myxœdema, and the Effects of Climate on the Disease. By A. MARIUS WILSON, M.D. London : The Scientific Press, Limited.
- The A B C Pocket Diary and Memorandum Book for Physicians and Pharmacists. London : Burroughs, Wellcome, and Co. 1894.
- The Physiology of Death from Traumatic Fever. By JOHN D. MALCOLM, M.B., C.M., F.R.C.S.E. : Surgeon to the Samaritan Free Hospital. London : J. and A. Churchill. 1893.
- Medicated Baths in the Treatment of Skin Diseases. By LESLIE PHILLIPS, M.D. : Surgeon to the Birmingham Skin and Lock Hospital. London : H. K. Lewis. 1893.
- The Healing of Rodent Cancer by Electricity. By J. INGLIS-PARSONS, M.D., M.R.C.S., M.R.C.P. Lond. London : John Bale and Sons. 1893.
- The Art of Living in Australia. By PHILIP E. MUSKETT, late Surgeon to the Sydney Hospital. London : Eyre and Spottiswoode.

* * Authors can have reprints of articles at the following rates :—

Not exceeding 8 pages	...	8/-	per 100
„ 16 „	...	12/6	„

The re-arranging of the type is the principal cost in the production of these reprints, so that smaller numbers will be the same price. Larger numbers at a proportionate reduction.

The Subscription (prepaid) to the *Birmingham Medical Review* is 6s. per annum, post free.

NOTICE.—*All Communications should be addressed to the Printers and Publishers, Messrs. Hall and English, 71, High Street, Birmingham.*

THE
BIRMINGHAM MEDICAL REVIEW.
FEBRUARY, 1894.

ORIGINAL COMMUNICATIONS.

APPENDICITIS AND PERITYPHLITIS.*

BY JORDAN LLOYD, F.R.C.S., M.S.
SURGEON TO QUEEN'S AND CHILDREN'S HOSPITALS.
LECTURER ON OPERATIVE SURGERY IN THE MASON COLLEGE.

DURING the past ten years few diseases have so much occupied the attention of our profession as those which I have grouped together under the title of this paper. My reasons for bringing a well-worn subject once more before you are several. First, because of the frequency with which these disorders are met with in practice; secondly, because much confusion and consequent misapprehension still exist concerning them; and thirdly, because I have had experience of a large number of cases during the past fifteen years.

Our modern ideas of "Typhlitis" are strikingly at variance with those of our forefathers; and at the present time, even, physicians and surgeons often hold somewhat different views of the origin, progress, and treatment of these maladies—differences due in the main, I fancy, to that baneful influence which almost necessarily results from specialism of any kind. But whatever may be the final position of the operating surgeon in relation to these affections, there can be no question as to the light which has been let into the whole subject by the early and heroic operations of our surgical colleagues across the Atlantic;

* Read to the Midland Medical Society, January 17th, 1894.

for it is to their labours that we owe most of our present knowledge of appendicitis and its consequences.

To arrive at a clear understanding of the subject, it is necessary to free the mind of much of the older nomenclature and of most of the older views. We shall consider the whole group of these disorders under the two heads of *Appendicitis*, by which is meant inflammation of the vermiform appendix and which is almost always a primary disorder, and *Perityphlitis*, by which is meant inflammation of the peritoneum or cellular tissue in the neighbourhood of the cæcum and its appendix, and which is almost always secondary to the foregoing.

The word *Typhlitis* implies, strictly speaking, inflammation of the cæcum, and is no more applicable to the disorders usually classed under this head than would be the term pneumonia to pleuritic effusions, or otitis media to temporo-sphenoidal abscess. It might more correctly be applied to specific inflammation of the cæcum, such as occurs in tubercle, typhoid, dysentery, and syphilis; and it would be well if it was reserved entirely for such conditions, differing as they do in almost every particular from the diseases I am considering to-night.

Before discussing in detail the pathology of Appendicitis and Perityphlitis it is necessary to refer briefly to a few points in the anatomy of the structures concerned. The cæcum is that part of the great intestine only which lies *below* the level of the ileo-cæcal valve. It is placed over the psoas muscle, and often overhangs the pelvic brim. The cæcum proper is entirely surrounded by peritoneum, but not so the ascending colon immediately adjoining. The vermiform appendix is attached to the inner and posterior aspect of the cæcum at a point corresponding to the middle of a line drawn between the umbilicus and the right anterior superior iliac spine, and known as Mac Burney's point. The tip of the appendix varies in position—a fact constantly to be kept in mind—for out of 200 cases examined by Dr. Fergusson in 77 only did it lie in the iliac fossa; in 75 it was behind the cæcum, *i.e.*, towards the loin; in 19 at the outer aspect and right side of the bowel; 11 times it lay downwards,

i.e., towards the pelvis; and 18 times inwards towards the middle line. The point of the appendix therefore may be found in the iliac fossa, in the loin, in the pelvis, or in the umbilical region. The appendix ranges in length from half-an-inch to a foot, and in thickness from a straw to an adult finger. As a general rule it floats freely in the abdominal cavity, but in about a third or less of the cases it is in contact, in a portion of its length and sometimes in its entirety, with the sub-peritoneal connective tissue.

The more I see of typhlitic affections the more firmly do I accept the theory that they begin primarily in the appendix, and that perityphlitic lesions are secondary to them. Appendicular disease is more common than is generally believed. In five per cent. of subjects dying of other affections there is to be found *post mortem* evidence of internal or external lesion of this organ. Disease in the appendix is usually due to the presence of scybala or other foreign bodies in its canal. They have been found in more than two-thirds of a series of seven hundred cases specially observed, and their absence from the majority of the remaining third is capable of explanation. Inflammation in the appendix is sometimes due to extension from the cæcum which may go on to ulceration and suppuration. I have little faith in simple primary *stercoral* ulcer of the cæcum as usually described. Ulcers undoubtedly do occur in this part of the intestine, but only as incidents in one or other of the affections above mentioned, or occasionally from direct injury by a foreign body. If the mere lodgment of fæces in the intestines predisposed to ulceration of the bowel, we ought to find this condition and its typhlitic sequelæ most often in the constipated class—viz., in middle-aged and elderly women—whereas it is rarely seen in them, being most commonly met with in males between the ages of 15 and 25, in whom constipation is exceptional; and inasmuch as constipation begins usually in the rectum, or sigmoid flexure, stercoral ulcers of these regions should be more frequent than those of the cæcum, whereas they are scarcely known. Constipation may frequently be responsible for serous, or mucous entero-colitis, but not for perforating stercoral ulcers.

We can best understand the several varieties of appendicitis and its consequences by systematically following the progress of a hypothetical case, from the beginning to the end, through the several possible courses which it may take. A small hard scybalum finds its way into the canal of a healthy appendix, and at once the organ attempts to eject it. Violent muscular contractions ensue; the foreign body is tightly gripped by the offended structures and irritation is set up; pain is felt at the seat of trouble, and is reflected to neighbouring parts, towards the umbilicus, across the abdomen, down the groin and hips; spasms of the overlying muscles of the abdominal wall occur, with vomiting and paresis of the bowel; constitutional shock results when the struggle between the muscular appendix and its foreign intruder is severe or protracted. If the appendix succeeds in ejecting its enemy, the symptoms quickly subside, and the attack may be over in a few hours. This condition has been likened by Talamon to the engagement of calculi in the ureter or biliary ducts, and the symptoms to which it gives rise have been designated by him "Appendicular Colic." The pain, spasms, vomiting, and constipation are purely reflex, as in the other better-known forms of colic. Instead of the appendix escaping "scot-free" from the struggle, it may suffer a slight injury, and a simple inflammatory process may then be started in the tissues of its walls. The case now becomes one of Parietal Appendicitis. This simple inflammation may be strictly confined to the tissues of the appendix, and may disappear in a few days; or it may travel through to the peritoneum, and give rise to a simple fibrinous adhesive localised peritonitis. A distinct, hard, tender, and painful tumour will then be found somewhere in the right lower quadrant of the belly, according to the anatomical position of each particular appendix. This form of peritonitis rarely suppurates. Cases of this kind run their course in ten to fifteen days, are amenable to purely medical treatment, and constitute the majority of the whole group of typhlitic affections.

But instead of the appendix triumphing over the scybala, the

intruder may maintain its position in the appendicular canal, giving rise to more serious irritation. Swelling of the mucous lining sets in and increases the pressure on the appendicular walls at the seat of the foreign body. The blood vessels of the appendix are compressed, the blood supply to the parts below is interfered with, and their nutrition impaired. Fluid collects in the blind end of the diverticulum, and micro-organisms find therein a most favourable medium for development. The altered tissues of the appendix fall an easy prey to microbic invasion, this septic inflammation soon extends to the peritoneum, and perforation or gangrene may quickly result. The consequences which follow perforation are determined by several factors. In the first place, if perforation occurs at a time when the appendix is free in the peritoneal cavity—that is to say, not shut in by inflammatory adhesions—the appendicular contents are poured into the peritoneal sac, a rapidly-spreading diffuse general septic or purulent peritonitis results, and the case becomes then one of Acute Perforative Peritonitis. If, on the other hand, adhesions have already formed about the appendix, between it and neighbouring omentum or coils of intestine, and the perforation takes place within the area of these adhesions, the resulting peritonitis is acute but localised, and a peritoneal abscess may form. The position of this primary abscess depends upon the anatomical position of the appendix in any given case. It may therefore appear in the groin, the pelvis, near the umbilicus, or in the loin. These cases constitute the variety known as Acute Appendicitis with localised Suppurative Peritonitis, and call for surgical treatment. Again, it may happen that the perforation takes place in one of those appendices which are partly or entirely in contact with the subperitoneal tissues, and then the contents may find their way into the retro-cæcal connective tissue, and an extra-peritoneal abscess is set up. Again, it may happen that before the parts have completely recovered from any of the above conditions, the whole process may be started anew, and may be repeated from time to time at irregular intervals. We then have the

variety known as "Chronic relapsing Appendicitis," or Perityphlitis, which must be distinguished from recurrent appendicitis, or perityphlitis, in which each attack is separated by an interval of complete recovery. These relapses may be due to the presence of a scybala or other foreign body, to intermittent distension of the appendix by mucus, to paroxysms of partial peritonitis, or to the presence of an encysted, chronic, peri-appendicular abscess.

It is impossible in a short paper to discuss at length the symptoms of these several varieties, but a general review of their leading phenomena may not be unprofitable. This can best be done by beginning with the simplest case and tracing it through its varying clinical possibilities, as we have already attempted with its pathology.

A young male adult enjoying his usual health, or who may perhaps have suffered from vague digestive troubles, is suddenly seized with acute pain in the right iliac fossa, accompanied by more or less violent colic, and followed by one or two attacks of biliary vomiting; within 12 to 36 hours the colic rapidly subsides, and the patient is practically well on the following day. Such are the phenomena—according to Talamon—of simple Appendicular Colic, and depend, as I have already said, on the engagement and ejection of scybala or other foreign bodies from the appendicular canal. These cases explain that entire absence of lesion which has been remarked in many of the appendices removed by American operators at the very commencement of a typhlitic attack.

Instead of clearing off in 36 hours, however, the colic returns from time to time; the pain remains fixed, sometimes limited to the right iliac fossa, sometimes being more diffused about the lower abdomen; the muscles of the region are hard and tense, resisting any deeper palpation, and there is acute tenderness on pressure over Mac Burney's point. A moderate degree of fever is present and constipation is usual. All may cease here, and in seven or eight days the symptoms may progressively diminish.

Towards the tenth or twelfth day the abdominal wall relaxes, and the pressure of a thumb-like tumour formed by the appendix may be discovered in the iliac fossa. Such a case is one of Simple Parietal Appendicitis, and corresponds to the stercoraceous typhlitis of the older authors.

In another instance we find, in addition to the symptoms of simple appendicitis already given, a painful tumefaction in the right lower quadrant of the abdomen, not noticeable when the appendix alone is affected. Pain continues, and local tenderness becomes conspicuous; temperature is raised to 101° or more. At the end of eight or ten days the peritonitic symptoms abate, the tumour progressively diminishes and disappears in from three to five weeks. Here we have an example of Acute Appendicitis with localised fibrous adhesive Peritonitis terminating, as they generally do, in resolution. All the above-described cases belong essentially to the physician, and constitute, as I have already said, the bulk of typhlitic disorders.

At other times we find that resolution does not occur, and that the temperature is still further increased and becomes remittent with evening exacerbations to 103 or 104° . Rigors may supervene, with perspirations and flesh loss; constipation is the rule; when meteorism is marked simulating obstruction of the bowels, but occasionally diarrhoea may be present. In about twelve days there can no longer be any doubt that there is a purulent collection in the right lower quadrant of the belly, whose position depends on the anatomical "lie" of the appendix. Fluctuation may then be detected in the iliac fossa, in the loin, near the umbilicus, or in front of the rectum by digital exploration of the bowel—a method of examination never to be neglected. There are certain accessory symptoms which may be observed during the course of peritonitis in the neighbourhood of the appendix; such as, for example, pain shooting towards the thigh or testicle, pain on movement of the flexed right lower limb, and tenesmus both rectal and vesical.

The ultimate progress of the affection depends now on the treatment employed, and necessarily varies according to the

intervention or otherwise of the surgeon. If such abscesses are left entirely to medical means they may give rise to general peritonitis either by extension or rupture; they may ulcerate into a large vessel or may even perforate the diaphragm and originate an empyema. They may burst externally or into one of the hollow viscera in the neighbourhood, such as the cæcum, rectum, bladder, or vagina.

In another type of case the first painful crisis is succeeded more or less rapidly in 24 or 48 hours by a fresh crisis of acute general abdominal disturbance. This "peritonitic stage" begins suddenly on the right side, and spreads rapidly throughout the abdomen. Pain is severe, continuous, and paroxysmal; tenderness is acute; the belly hard, tense, and hollow. Percussion signs are variable and therefore valueless. Vomiting recurs and becomes almost continuous; constipation is complete. The urine is scanty, dark in colour, and contains albumen and indican. The temperature is never very high—rarely above 103° . The face becomes drawn, the extremities cold, and the patient dies with symptoms of diffuse peritonitis. Death usually occurs before the eighth day—sometimes as early as the second when the peritonitis is septic—or as late as the second week where it is purulent. Such is the course of Rapidly Perforative Appendicitis. Perforation may take place at any moment, just as in simple ulceration of the stomach, and its symptoms and evolution present a remarkable uniformity.

Such are, in their chief characteristics, the three principal forms of Acute Appendicitis, terminating, according to the rapidity of the affection, either in resolution, or in perforation, with localised or with generalised peritonitis. Although these are the principal types, there are still a number of cases where, the appendicitis having commenced suddenly and acutely, the symptoms eventually assume an insidious, slow, and irregular course, with pyrexial and apyrexial intervals, with periods of pain and of ease, and alternations of amelioration and aggravation, which may continue for weeks and months, or may at any

moment suddenly assume a more acute progress. This class has been called Subacute Perforating Appendicitis, and either involves the peritoneum slowly, or perforation occurs into the connective tissue, giving rise to cellulitis in the ileo-lumbar region. Some of these subacute cases are insidious and obscure throughout.

Lastly, there is the fifth clinical variety of Chronic Relapsing Appendicitis, which may run over a period of months or years, and is essentially a chronic illness, with paroxysmal attacks assuming one or other of the principal varieties (appendicular, peritonitic, or suppurative) already sketched out. During the intervening periods the patient tends to progressively recover, but he never completely recovers. He has vague abdominal pains, easily induced distension, malaise, discomfort in the right iliac fossa after exertion, and alternations of constipation and diarrhoea. There is usually tenderness at Mac Burney's point, and a local swelling of variable size is almost always present. The general health is impaired, and a kind of intestinal cachexia supervenes.

The diagnosis of the several forms can easily be made if careful attention is paid, first, to the initial painful onset; second, to the phenomena of intestinal paralysis and obstruction; third, to the general symptoms; and fourth, to the tumour. But this matter of diagnosis is too long for us to discuss to-night. I may, however, mention those conditions which have to be borne in mind as simulating appendicitis in one or other of its forms. The rapidly perforative cases have to be distinguished from acute peritonitis due to other perforating lesions, such as gastric, typhoid, tubercular, and malignant ulcers, pelvic diseases in women, and acute intestinal strangulation. The less acute and more localised forms, from hepatic, renal, intestinal, and gastric colics; acute entero-colitis, intestinal obstruction, and acute coxalgia in children. The subacute forms, from typhoid fever and perinephritic abscess; and the relapsing forms, from tubercular peritonitis and cancer of the cæcum.

I could refer you to cases of appendicitis which have come under my own observation, and in which almost every one of these maladies had previously been diagnosed; and I might also have added "influenza" to the list!

The treatment of "typhlitic" maladies is a simple matter when once an accurate diagnosis is made. The majority are amenable to therapeutic measures and fall properly within the province of the physician, but a certain number develop lesions which can only be dealt with by the surgeon, and the sooner they are recognised and the proper means taken to combat them, the better for the patient, for it is these surgical lesions which constitute the dangers to life.

I often call to mind two speeches which I heard in this library only two or three years ago in a discussion on these maladies. A hospital physician of experience said that "every case of typhlitis which had come under his care up to that time (and I believe there were nearly thirty in number) had recovered except one, and in that one he had called in the services of a surgeon." A surgeon of world-wide reputation on the other hand said, that "every case of typhlitis should be operated on, for unless such was done, sooner or later the patient would die from his disorder." Either these conflicting statements contain a fallacy, or these distinguished gentlemen were saying what was absolutely untrue. They both used the same word "typhlitis," but did they refer to the same pathological conditions? The physician doubtless had in his mind the purely medical cases, and the surgeon only the purely surgical ones. What had become of the more serious cases in the practice of the physician or of the milder ones in the case of the surgeon I am unable to say, but I fancy they must have been placed in other categories of disease altogether, for diagnostic error alone can explain the discrepancy.

We can with advantage for purposes of treatment divide all typhlitic maladies into Simple and Complicated. The *Simple* include "appendicular colic," simple parietal appendicitis with

or without localised fibrinous peritonitis, and certain cases of the subacute and recurrent varieties. The *Complicated* include the acute perforative form with diffused peritonitis, or the less acute form with localised suppuration: some subacute, and probably all chronic relapsing cases.

The Simple varieties call for sedatives, of which I think belladonna is the best, administered in half-grain doses of the extract by the mouth, or single grains in suppositories by the rectum; but morphia may be given sub-cutaneously with advantage when "colic" is severe. Local blood-letting by applying ten or twelve leeches over the right iliac region is of the greatest advantage, and often relieves pain when sedatives have failed. The local application of glycerine of belladonna and heat, either dry or moist, is often of service in the milder forms. The bowels must be kept clear, and not "blocked" by opium as was formerly recommended. Few drugs act so well as calomel when exhibited in three to five grain doses with a third of a grain of extract of belladonna. Castor oil may be given with safety, and I have seen great benefit attend the use of sulphate of soda administered in two drachm doses combined with twenty minims of tincture of belladonna. If constipation persists and meteorism is considerable, purgative enemata containing half an ounce of turpentine or a couple of drachms of cajaput oil afford great relief. It has been advised that intestinal antiseptics should always be given, in the form of creosote, carbolic acid, or the more fashionable salol. The diet should be liquid throughout, and should consist chiefly of animal broths and meat juices. Although milk may be used in many cases there are many others in which it does harm, and the evil is not always to be remedied by peptonising. Fruits and vegetables of all kinds must be withheld during the entire illness. After the subsidence of acute inflammatory symptoms the skin over the tumefaction may be rubbed gently night and morning with equal parts of mercury and belladonna ointments. A patient should be kept absolutely at rest until every trace of pain and tenderness have disappeared; a certain amount of

hardness is often left behind and may be felt for months. Constipation, and the swallowing of indigestible matters, such as the pips and seeds of fruits, skins of vegetables, currants, raisins, and the like, nuts, the fascia and gristly parts of meat are carefully to be guarded against in future.

The Complicated cases call for operation of some kind, and the question, "How are we to know when the time for operation has arrived?" is often most difficult to answer. In the rapidly perforative variety we must operate immediately; a few hours' delay robs the patient of his only chance—a very slender one even at the best. In the localised variety we should operate as soon as suppuration is suspected, for to wait until the presence of pus is obvious is only to sacrifice a large number of lives which might be saved by timely interference. If error is to be made at all in this matter, it had better be on the side of operation. I have several times regretted that I had not interfered earlier. I have not in a single instance discovered that I was operating too soon. I have found pus in every typhlitic swelling which I have been allowed to explore. It is scarcely ever necessary to operate in this variety before the fifth day, the most favourable period being from the eighth to the twelfth. The site of the incision is determined, to some extent, by the position of the local swelling; but, as a rule, localised suppuration may most surely be got at through the incision employed for removal of the appendix, and made in the following manner. A line is drawn from the right anterior superior iliac spine to the umbilicus. A 3-inch incision is carried parallel to the outer half of Poupart's ligament, its centre corresponding to a point on this line about two inches from the iliac spine, its inner extremity being kept well outside the deep epigastric artery. The structures in the abdominal wall generally appear quite normal, and are easily recognised as they are cut through. When the peritoneum is opened, pus may at once make its appearance, or it may still be "shut off" by adhesions between the parietes, intestines, and omentum. These adhesions must be gently separated first towards the outer side of the wound,

and subsequently downwards to the pelvis, backwards to the loin, or upwards towards the umbilicus if necessary. Care must be taken to avoid opening the healthy area of the peritoneal sac; and when pus is found, the less "poking about" is done the better. Experience has taught me that flushing the abscess cavity is quite unnecessary; and as it is not free from risk, I advise you to avoid it. If a damaged appendix thrusts itself "under your nose," you may remove it; but I caution you against wasting time and disturbing adherent structures by unduly searching for it. Be content to have found pus, slip in a drainage tube, close your wound with a suture at each end, and apply your dressings. I have opened typhlitic abscesses through incisions in the loin, the rectum, and below the umbilicus, and most of them have done well; but on three or four occasions I have had subsequently to make supplementary iliac incisions. The after-treatment is practically the same as that of any other abscess, except that here we have a greater liability to pus retention in adventitious areas.

When you are dealing with cases of acute diffused peritonitis, the abdomen must be opened in the middle line above the pubes. The appendix should be found and removed if it can be done quickly, as it is a source of greater danger here than in the localised variety; but too much time must not be spent in looking after it, as patients with acute diffused peritonitis bear operative interference badly. I disapprove of the routine practice of flushing even in this condition, and would advise you to get in a big tube as quickly as you can, and leave nature to do the "scavengering." Theoretical surgery tells of many ingenious things which *might* be done in some of these cases; but practical surgery teaches me that, having successfully tapped the inflammatory peritoneal collection (whatever be its exact nature), the less I do subsequently the more likely is my patient to get well. The healthy person with a sound peritoneum may be, and is, very tolerant of abdominal interference, but it is not so where the peritoneum is inflamed and the individual already three-fourths dead in consequence.

In speaking of the treatment of relapsing typhlitis, I must ask you to bear in mind the distinction I have drawn between it and the recurrent variety, which latter has to be treated according to the character of each particular recurrence. That recovery without surgical operation is possible in the relapsing form I am willing to admit, but that it is extremely rare I am absolutely certain. The successive attacks are due to a chronic and permanent lesion; a mucous dilatation of the diverticulum, the presence of a foreign body, or a small juxta-appendicular abscess. Under exceptional conditions it may be justifiable to give medical treatment a trial, but in the large majority of cases it will be better to operate. The difficulties and dangers of the operation depend on the nature of the lesion, for whereas excision of a simple chronically inflamed and dilated appendix is a matter neither of difficulty nor risk, it is quite the opposite when the parts about are thickened and matted together by chronic plastic inflammation; and indeed it sometimes happens in such cases that the operation has to be abandoned without the appendix having been found. I have such a case under my care at the present time, and I am only comforted in my failure by knowing that some of the most competent operators at home and in America have met with similar non-success. The best time for operating is in the interval between the relapses, and the operation is conducted on the lines already laid down. When the appendix is much thickened it is difficult to suture its peritoneal surfaces together if the organ is divided transversely across, but this difficulty is easily obviated by making two equal lateral flaps, as in Symes' amputation through the thigh, and bringing their edges securely together with a closely applied continuous silk suture. Every part of the wound must be cleared of blood clot and other adventitious substances, and it may then be closely sutured without drainage.

I have purposely avoided reading notes of any of my cases, believing that I might perhaps occupy your time with greater advantage by treating the subject in a broader and more general way.

REDUPLICATION OF THE FIRST SOUND OF THE HEART: A CLINICAL STUDY.

BY O. J. KAUFFMANN. M.D., M.R.C.P.
PHYSICIAN FOR OUT-PATIENTS AT THE QUEEN'S HOSPITAL;
VISITING PHYSICIAN TO THE INFIRMARY.

IN the following paper it is proposed to consider the phenomenon commonly called "reduplication of the first sound of the heart" in its clinical relations and in its bearing upon the diagnosis and prognosis of those maladies in which it is most usually encountered.

Occurrence and Characters of the Sign—The doubling is of frequent occurrence, and is not difficult to recognise. In the cases which have come under the writer's notice it will appear that reduplication is met with in young and old of both sexes, in serious and in less grave ailments. The doubling is, as a rule, to be heard most distinctly just inside the apex of the heart, and is generally heard from that point inwards as far as the left edge of the sternum, and along this vertical line upwards as high as the fourth costal cartilage. In a smaller proportion of the cases the doubling can be heard at the third costal cartilage. A minority of patients shew the doubling in the middle line of the sternum also, and when the sign is heard there, it is commonly audible also in the right side-sternal line and at the aortic cartilage; in fact, all over the cardiac area. This however is, as before remarked, comparatively rare, and the usual place in which reduplication must be looked for is at and immediately inside the apex-beat and in the left side-sternal line, between the junctions of the sixth and the fourth costal cartilages with the sternum.

In describing the phenomenon to be considered, it is necessary to say that that sign only is spoken of which appears plainly to the ear as a doubling of the first sound of the heart, or perhaps, speaking more accurately, as a separation into two parts of the first sound. The name "bruit de galop" or "galloping heart" has been applied to this condition. But in the

cases here to be dealt with the two parts into which the first sound appears to be divided are separated from one another by a short interval, appreciably shorter than the interval separating the second heart sound from the first sound preceding it (the "short pause"). To call this "galloping heart" is a misnomer, as the sound in no way reminds one of a gallop. The true "galloping heart" is, in the writer's experience, a much rarer sign, easily distinguishable from the one at present under consideration, for the pauses between the three heart sounds are equal; and no one having once heard the galloping rhythm is likely to confound it with simple doubling of the first sound. That the two phenomena are closely related to one another as regards their etiology is, however, highly probable.

The two portions of the first sound are of equal pitch and duration. Their pitch—an important matter—is often about that of the normal first sound; frequently, however, it is raised above the normal. The duration of each portion is always shorter than that of the normal I.*

It is not possible in all cases to time the reduplication with accuracy, but in many instances the writer has found that the second portion of the doubled sound corresponds in time with the impulse of the heart's point against the chest-wall, and therefore corresponds with the normal I. The first part of the doubled sound therefore appears (in these instances) as a prefix to the first sound. The apex impulse never coincides in time with this "prefixed" sound, and accordingly it seems that this term may not inaptly be used to designate the first part of the doubled I. As a rule the rate of heart-beat in these cases is only very moderately raised; frequently it remains at the normal, but never falls below. Now since the frequency of the heart-beat is never lowered in these cases, but remains at the normal figure or is slightly raised, and as moreover there is no appreciable shortening of either the short pause or the long pause of the cardiac cycle, it follows that the second part of the doubled I, or that corresponding in time to the apex impulse and to the first sound

* For the sake of brevity this, the Roman numeral I., will be used for "first sound of the heart."

Prepared in Buckinghamshire.

LIQUOR CARNIS (CAFFYN). (MEAT JUICE.)

The LANCET reports again :

"This valuable food has on a previous occasion found a place in our records of analytical work. It has since been considerably improved in many essential respects. not the least of which are flavour, keeping properties, on exposure to air, and mode of manufacture, in which, it should be added, provision is made to secure the product against all risk of infection."—THE LANCET.

SUPPLIED IN 2/- BOTTLES RETAIL.

London Offices :
SMITHFIELD WORKS,
28a, FARRINGDON ST.

"Viro!"

"We have made an extensive trial of "Viro!, especially amongst invalid children, and find it to be an excellent and popular form of food for them. It has an agreeable taste, and does not destroy the palate for the more ordinary ailments. Viro! contains, in proper proportion, all the constituents of an ordinary mixed diet; it is easy of administration, digestion, and absorption, and so cannot fail to be of the highest utility in a large class of wasting disorders."—BRAITHWAITE, 1893.

THE LANCET.

[LONDON.] SATURDAY. [AUG. 29,

"CAFFYN'S MALTO-CARNIS represents a judicious combination of LIQUOR CARNIS (meat juice) made into a delicious and tasty form by combining it with Malt and Cocoa."

CAFFYN'S MALTO CARNIS

"contains 75 per cent. of Liqueur Carnis with Malt and Cocoa."

For Analysis see "The Lancel," August 29th, 1891.

The Liqueur Carnis Co., Ltd.,
Chief Offices & Works :
ASTON CLINTON,
BUCKS.
WILLIAM SHEPPERSON, Managing Director.

NESTLÉ'S FOOD

FOR

INFANTS & INVALIDS.

"Invaluable in Cholera Infantum."

"Beneficial as a Diet in severe cases of Typhoid."

"Renders valuable assistance in Wasting Fever."

PAMPHLET containing Extracts from Standard

Medical Works in which the above

Testimony is given, sent free with

Sample Tin on application to

H. NESTLÉ,

9, Snow Hill,

LONDON,

E.C.

HIGHEST HONOURS at the CHICAGO EXHIBITION,
THE MEDAL and **DIPLOMA** have been
awarded both to NESTLÉ'S FOOD and NESTLÉ'S MILK.



ATTENTION

is also drawn to

NESTLÉ'S
SWISS (CONDENSED) **MILK.**

Which through its RICHNESS in CREAM and UNIFORMITY of QUALITY has obtained the LARGEST SALE IN GREAT BRITAIN.

It can be used for all purposes of FRESH MILK.

Samples to members of the Medical Profession sent free on application to

H. NESTLÉ, 9, SNOW HILL, LONDON, E.C.

in health, must be of much shorter duration than this latter, and this is, in fact, the case. This portion of the first sound is always found to be of shorter duration than the normal I, and likewise lacks that peculiarity of *timbre* proper to the first sound of a healthy heart. The pitch however of the two portions, as before remarked, varies in different cases, being in some high, even higher than that of the second sound, and in others equalling the usual pitch of a healthy I.

The reduplication is, as illustrated by the appended table, rarely a constant phenomenon. In the great majority of cases it is evanescent and disappears with the return of the patient to a good general condition. In some the doubling was observed to appear one day and disappear on the following, to return shortly afterwards, but still to disappear for good as the patient approached improved health. In two patients only, who remained for a considerable time under observation, was the phenomenon so constantly found present as to lead to a belief in its permanency (4 and 11), though in No. 4 the patient did not improve sufficiently to allow of a satisfactory conclusion on the point.

An examination of the annexed table of 34 cases of disease presenting the reduplication, which have occurred to the writer, will shew that the phenomenon is met with in several classes of ailments. The greatest number of instances could be grouped under the heading of "chronic Bright's disease" (21-32), and the cases in this category present the conditions of "cirrhotic kidney" and of "chronic large white kidney" in about equal frequency (22, 23, 24, 27, 28, 30, 32 of the former, and 21, 25, 26, 29, 30 of the latter).

The second largest group comprises the patients suffering from dilation of the heart, especially of the left ventricle, generally from chronic alcoholism, but due in some instances to other causes, such as weakness and starvation or senility (14-20). To this group may be fairly added the one case of adherent pericardium, occurring in a man aged 70 (13).

Then follows a group of patients in whom the morbid sign occurred apparently as the result of weakness originating in

one set of cases, from dyspepsia without other discoverable cause (6, 7, 9, 10); in another set, from under-feeding or some preceding acute illness from which the patients were, at the time of observation, recovering (8, 11, 12). This latter set includes a man suffering from typhoid, who developed the sign in question about the end of the first week of his fever (12).

Displacement of the heart from chronically acting causes is the apparent reason of reduplication in a fourth group of cases (1-5), which will be observed to include displacements of the heart to the right and to the left. The group includes no case of upward displacement of the heart.

Fifth and last, there is a small class (33 and 34) presenting reduplication of the first sound as a result of bronchitis accompanied by emphysema.

It has not been possible to group together with absolute accuracy all the cases in their several divisions. Necessarily some overlap the limits of the division in which they have been placed, and might fairly have been located in another group. This is notably the case with one or two of the patients classed as having dilated hearts without any Bright's disease. They have however been placed according to the main characteristics presented by each case.

A few explanatory words regarding some of these classes may not be inappropriate. In groups 1 and 2 we have to deal essentially with patients whose hearts are dilated owing to some chronic affection of the myocardium itself, probably, if one may infer from some few microscopic examinations of heart-muscle in analogous conditions, an affection characterised by fatty degeneration near the nuclei of the heart-muscle-fibres, together with loss of the transverse striation. The third and fifth groups are in all probability instances of dilated hearts, not from permanent changes in the myocardium, but from temporary malnutrition and overwork, caused in Group 3 by disease or indigestion, and in Group 5 by the temporary embarrassment offered by the bronchitis and emphysema. One case here (10) is of particular interest, the patient, a labourer, having a heart hypertrophied as the result of hard work, the hypertrophy again

becoming dilated in consequence of poor circumstances and unsuitable food.

The fourth group will be observed to comprise cases of chronic displacement of the heart only, nor did a single case of recent displacement present the reduplication. Particular attention was given to cases of distension of the stomach, but in no instance did this appear to produce the sign in question (with the doubtful exception of (5), and it will be seen by reference to the table that in no case in the dyspeptic group was the stomach found dilated or distended. It would appear, therefore, that when reduplication of the first sound accompanies displacement of the heart the latter is chronic, and probably some further change is established in the heart-musculature by this displacement. Cases 1, 2, and 3 were in tolerably good health when first observed, and their disease was of long standing; still it is necessary to bear in mind that there was a condition of the body in these patients which led them to seek advice at a time when the doubling could be heard, a condition, presumably, of temporary depression superadded to their chronic ailment.

As has been before remarked, the reduplication is in the great majority of instances an evanescent sign, and one, moreover, which disappears as soon as the patient begins to recover general health. It is generally accepted, and the cases here observed bear out this view, that the doubling in question is an indication of muscle-failure of the heart, and the writer is inclined to infer that it is a sign of great value as indicating such failure though all other signs of the same may be absent. Its disappearance so regularly coincided with general improvement that it could be taken as a good point in the prognosis when the doubling disappeared and left a normal first sound, or, as was frequently the case, a first sound accompanied by a systolic murmur, apparently of mitral origin.

The presence of reduplication has been taken by some observers to justify a grave and unfavourable prognosis; but in the series of cases here offered only one death took place while the patient was under observation (24). With two exceptions the reduplication disappeared while the patients were under

observation, and it therefore seems that, though its presence is an indication that the patient requires all treatment that can be with advantage employed for a dilated, feeble heart-muscle, yet this degree of dilation is, in the great majority of instances, to be recovered from.

It is noteworthy that in no single case did the sign under consideration occur in chronic valvular disease of the heart, even in the latest stages; and from a diagnostic point, the occurrence of this symptom appears to the writer to justify the exclusion of all primarily valvular disease of the heart as the cause of trouble. Where there is any sign of displacement of the heart's apex, search should be made by enquiry and physical examination for chronic pleurisy or phthisis. Where only very slight displacement of the heart is discoverable, or where this condition is absent, special attention must be directed to any cause for dilation of the myocardium. An evident dilation of the left heart, more especially when combined with hypertrophy, will point to Bright's disease as the cause of the trouble, and perhaps after searching for the exact spot of the apex-impulse, an examination of the urine is the step most likely to lead to discovery of the chief ailment of the sufferer.

It is always a question how much weight should be given to a single physical sign belonging to the heart, inasmuch as for the majority of diagnoses it is necessary to consider the grouping of several signs and symptoms rather than (with a very few exceptions) the presence of isolated signs. It is shewn in the table that the doubling of the first sound may be alone, of all morbid physical signs, present in a case of dilation of the myocardium; and the writer believes that, without laying undue stress upon it, this sign may, when discovered, serve as a useful warning that the heart is in a state of weakness which requires prompt treatment.

An attempt has been made to bring the arterial tension into relation with the reduplication, but has failed to give definite results, the state of intra-arterial pressure having been found high in some cases, low in others, and not evidently altered in a large proportion of the patients.

TABLE.

<i>Patient, Disease and general condn.</i>	<i>Reduplication.</i>	<i>State of Heart.</i>	<i>Pulse.</i>	<i>Urine.</i>
1. Male, 19, student, strong, healthy and athletic. Old left pleurisy with displacement of heart to right.	At apex and inwards. Variable.	Second sound not accentuated. Heart not enlarged, First sound of poor quality, short and high-pitched. This improved with general improvement.	Tension normal.	Normal.
2. Male, 14. General condition rather depressed. Typhoid 12 months ago and some weakness ever since. Signs of old left pleurisy with displacement of heart to right.	Present. Duration could not be determined.	Heart not enlarged. Second sound not accentuated.	Tension normal.	Normal.
3. Male, 24, labourer. General condition fair. History of right pleurisy and signs of old effusion. Heart displaced to left.	A little inward from apex, but not at apex. Disappeared with improving general health.	Slight epigastric pulsation. Apex in 6th space. First sound of normal quality.	Tension normal.	Normal.
4. Male 27, brassfounder. Small build. Kyphosis with deformity of chest. Ozena. General condition poor.	Constant.	Probably displaced by chest deformity. The exact position not to be made out.	Tension normal.	Normal.
5. Male, 59. Weak, old phthisis with cavitation and retraction of left lung. Dilated stomach. ¹	At apex & all over cardiac area excepting aortic cartilage Constant for a time, then disappeared.	Much displaced to left. Second sound not accentuated.	Tension low.	1010. No albumen.

<i>Patient, Disease and general condn.</i>	<i>Reduplication.</i>	<i>State of Heart.</i>	<i>Pulse.</i>	<i>Urine</i>
6. Female, 18. General condition moderately good Dyspepsia and constipation.	Evanescent.	Heart not enlarged. Second sound not accentuated.	Tension normal.	Normal.
7. Male, 12. General condition rather poor. Dyspeptic complaints.	Variably present, and when not present alternating with first sound of poor quality.	No enlargement.	Tension fair.	Not recorded.
8. Male, 58. General condition bad; great wasting and weakness. Cancer of small curvature of stomach without dilation of that organ. Anæmia, pallor, and cachexia.	Variable and alternating with first sound of poor quality.	Not enlarged or displaced.	Tension fair. Rate moderately increased.	Normal.
9. Female, 40. General condition poor; pale and flabby. Chronic gastric catarrh. No symptoms of dilated stomach.	At apex.	Not enlarged or displaced.	Tension normal.	Normal.
10. Male, 32, labourer. General condition poor. Has suffered from dyspepsia for many months.	Inside apex beat and up left side of sternum. Disappeared entirely with return of general health.	Left ventricle hypertrophied and dilated. Second sound not accentuated. Apex at first in 5th space outside nipple line; later on in 6th space.	Tension normal.	Normal.
11. Male, 13. General condition weakly but not bad. Recovering from acute tonsillitis, probably not diphtheritic. No evidence of dilation of stomach; no dyspepsia.	Heard all over cardiac area. Very persistent.	Apex in 4th space. Second sound not accentuated.	Tension normal.	Trace of albumen which disappeared.

12. Male, 42. Long a hospital patient suffering from chronic alcoholic neuritis. While an inmate was attacked with enteric fever, and then the reduplication appeared. His condition at no time very bad. Recovery perfect.	Appeared at end of first attack of typhoid and disappeared on recovery. Alternated sometimes with a systolic murmur accompanying first sound.	Apex slightly displaced outwards. Left ventricle dilated.	Rate 100-120. Tension low.	A little albumen during fever; none after or before.
13. Male, 70. Senile weakness. Adherent pericardium after well-marked attack of fibrinous pericarditis. Pallor and anæmia	Very constant.	Left ventricle dilated.	Tension rather below normal.	Normal.
14. Male, 64 Considerable general weakness. Chronic bronchitis. No definite signs of Bright's disease. Tachycardia. Dilated heart with muscular degeneration.	Audible all over cardiac area. Very long persistent, but disappeared ultimately with general improvement.	Dilation of both right and left heart. Obstruction to return of blood from veins.	Variable, but often up to 180. Low tension.	Specific gravity low No albumen.
15. Female, middle-aged. General condition poor. Alcoholic.	Not heard at apex but at left edge of sternum as high as third costal cartilage.	Dilated.	Not recorded.	Not recorded.
16. Female, 50 Chronic alcoholic. Alcoholic neuritis and alcoholic dyspepsia.	Inconstant.	Left ventricle greatly dilated.	Not recorded.	Normal.
17. Female, 60. Chronic alcoholic, suffering from dyspepsia and alcoholic tremors. General condition bad.	Inconstant.	Left ventricle dilated. Second sound not accentuated. First of poor quality.	Small, tension low.	Normal.

<i>Patient, Disease and general condn.</i>	<i>Reduplication.</i>	<i>State of Heart.</i>	<i>Pulse</i>	<i>Urine.</i>
18. Male, 68. Old and withered looking and in feeble condition. Doubtful cirrhosis of liver. General dropsy and ascites.	Inconstant. Heard at apex and inwards along left edge of sternum and up to pulmonary cartilage.	Not appreciably enlarged or dilated, and not displaced. First sound normal.	Tension remarkably low.	Normal.
19. Female, 43. General condition very fair.	At apex and inwards and at left edge of sternum up to fourth costal cartilage.	Not appreciably enlarged. First sound at apex of fair quality	104, regular and equal. Tension low	Normal.
20. Male, 76, cooper. General condition very fairly good for the age. Petechial spots on hands and arms. Slight general anasarca, most marked in legs. Gained 1 st. in weight.	At apex, and only occasionally. Disappeared with improved general condition.	Chest deformed, Apex in sixth space (probably from deformity). Second sound at aortic cartilage accentuated. First sound of poor quality after disappearance of reduplication.	Tension a little raised, irregular, and unequal.	Quantity small, rich in urea. 1025. At first contained a little albumen, which disappeared entirely later on.
21. Female, 36. Fat and bloated looking. Cirrhosis of liver. Chronic nephritis.	Present at first. Disappeared with rest in bed and return to better general condition. At left edge of sternum only.	Left ventricle dilated.	No record.	1020. Much albumen. Casts.
22. Female, 65. Chronic nephritis. Pale and weak, and gives history of general dropsy.	Inconstant. At left edge of sternum only.	Left ventricle dilated. Second sound not accentuated.	Tension slightly increased.	As in chronic nephritis.
23. Male, 34. General nutrition poor. Gouty, and early grey. Chronic nephritis.	Variable.	No enlargement.	Tension raised.	As in granular kidney.

24. Male, 59.	In very low condition. Granular kidneys.	Present.	Left ventricle dilated. sound not accentuated.	Second	Tension low.	As in granular kidney.
25. Male, 60.	General condition not bad. Cerebral hæmorrhage.	At apex only, and pretty constantly found.	Right and left heart dilated.		Tension raised.	Fair quantity of albumen and casts.
26. Male, 67.	Chronic Bright's disease. Dilated and irregular heart	Inside apex beat and along left edge of sternum. Inconstant.	Very little dilation evident. Second sound at aortic cartilage much accentuated.		Irregular. Tension high.	1020. As in chronic nephritis.
27. Male, 70.	Feeble. Right hemi-paresis.	At apex. Disappears with rest in bed, and is replaced by a first sound of poor quality.	Left ventricle dilated.		Tension constantly raised.	As in granular kidneys.
28. Female, 53.	Looks much older, shrivelled, and is anæmic.	Present.	Left ventricle dilated.		160 to 180.	As in granular kidneys.
29. Male, 52.	Pale and anæmic, with slight general anasarca.	Present.	Left ventricle hypertrophied and dilated. Second sound at aortic cartilage accentuated.		Tension raised.	Full of albumen and casts.
30. Male, 49.	Pale but not anæmic. Looks older than his years. General bronchitis, and obstruction to return of venous blood.	At apex, and along left edge of sternum up to pulmonary cartilage.	Apex displaced downwards and outwards.		Regular and deliberate. Tension much increased.	As in granular kidneys.
31. Male, 55.	Unhealthy and bloated looking. Chronic alcoholic. General anasarca.	At apex only. Disappears with rest in bed.	Left ventricle dilated.		Tension raised.	1015. Loaded with albumen. Many granular casts.

<i>Patient, Disease and general condn.</i>	<i>Reduplication.</i>	<i>State of Heart.</i>	<i>Pulse.</i>	<i>Urine.</i>
32. Male, 76. General condition fair. Some general anaemia.	All over cardiac area. Disappeared with general improvement of patient.	Left ventricle dilated, from which condition it recovered.	Full, but tension not appreciably increased.	Some albumen and a little blood. Blood disappeared; albumen remained. 1010-1011.
33. Female, 63. General condition tolerable. Bronchitis and emphysema.	All over cardiac area except at aortic cartilage. Disappeared with rest in bed and general improvement.	Not evidently enlarged or displaced. Second sound also doubled.	Tension not raised.	1005. No albumen.
34. Male, 36, labourer. Much bronchitis. Embarrassed right heart.	At apex and at left edge of sternum up to fourth cartilage,	Right side dilated. Left not evidently altered.	Moderate. Tension moderate.	Normal.

REPORTS OF CASES.

CHRONIC SUPPURATIVE OTITIS MEDIA; ANEURISM OF INTERNAL CAROTID ARTERY; LIGATURE OF COMMON CAROTID ARTERY.

BY F. MARSH, F.R.C.S.

A. O., a delicate looking woman, æt. 27, was admitted into the Queen's Hospital with a swelling in the region of the left ear and upper part of the left side of the neck.

History.—Her family history is unimportant. Eight years ago she had left facial paralysis, attributed to cold. A few weeks later a purulent discharge from the left middle ear commenced. For some years she has been under treatment for this latter condition, and aural polypi have twice been removed. During the last twelve months she has occasionally had painful swellings in the left ear, which always completely subsided, and which she attributed to cold. About a month before admission the swelling appeared again and has remained, but she does not think it has increased much in size. Any exertion, however, on her part causes a temporary increase of the swelling, and slight bleeding occurs from the left meatus if she holds her head down. There is no history of injury. Her general health has not been good since the occurrence of the paralysis, and she has only done household work of the lightest kind.

Present Condition.—The patient is anæmic and neurotic, and complains much of sharp shooting pains referred to the parts beneath the swelling. On the left side there is a tense, circumscribed, pulsatile swelling of an oval shape, measuring three and a half inches in the vertical, and three inches in the horizontal direction, and extending upwards from the angle of the

jaw to the level of the tragus. A distinct bruit is heard on auscultation. The left external auditory meatus is almost occluded by the swelling. There is a considerable purulent discharge from the left middle ear, and almost complete left facial paralysis.

The swelling was diagnosed as an aneurism of the internal carotid, probably caused by an extension of the middle ear inflammation to the coats of the vessel.

On October 6th the left common carotid artery was ligatured at the site of election. The descendens cervicis nerve had to be dissected from the inner side of the sheath of the vessels. When the ligature (carbolised catgut) was tied, pulsation in the tumour ceased, but returned feebly in a few minutes.

For twenty-four hours after the anæsthetic there was troublesome vomiting, but the pulsation was not apparently increased by it. Feeble pulsation continued, and on October 13th it seemed more marked, and the tumour seemed a little larger. The wound was dressed and found to be healed soundly throughout by first intention.

On October 23rd the pulsation was gradually decreasing and the tumour hardening. Improvement went on slowly and the patient returned to her home in the country on November 15th, the measurements of the tumour then being three inches in the vertical and two inches in the horizontal direction.

A letter was received from the patient on December 8th saying that the swelling had got harder, but seemed to vary a little in size, being always smaller at night.

For careful notes of the case I am indebted to Mr. R. B. James, House-surgeon, and Mr. G. J. Branson, B.A., Dresser.

THREE CASES OF PERFORATION OF GASTRIC ULCER, WITH REMARKS ON ITS OPERATIVE TREATMENT.

BY EDWARD DEANESLY M.D., B.SC. LOND., F.R.C.S. ENG.
WOLVERHAMPTON.

Case 1. A female, aged 23, was admitted to the General Hospital, Wolverhampton, under the care of Mr. Kough, on August 31st, 1892, at 5 p.m., and died at 7.30 p.m. the same day.

The history, which after death was elicited from the mother, was as follows:—She had complained of pain in the epigastrium and back after meals for a fortnight previously, but had not been known to vomit. On August 27th, two hours after a meal, while lying down she felt sudden severe pain in the belly, and vomited almost at once. She continued to vomit almost incessantly for the next four days. The bowels did not act till August 31st after an enema. She suffered severe constant pain over the whole abdomen.

On admission, the face was pinched, the eyes deeply sunk, pulse small, respiration purely costal and gasping. The abdomen was distended and tympanitic, except in the flanks, which were dull. The parietes were not rigid. Owing to the absence of the history afterwards obtained, some form of acute intestinal strangulation was diagnosed, and preparations were made for abdominal section; but death occurred before this could be carried out.

Post mortem the abdomen contained several pints of thin whitish pus, with abundant flakes of lymph on the pelvis and flanks. The anterior wall of the stomach was adherent to the under surface of the liver by recent adhesions situated round a circular perforation the size of a threepenny-piece. Viewed from within, the perforation corresponded to the floor of a circular ulcer the size of a shilling, with a slightly thickened,

smooth, round edge, situated two inches from the cardiac orifice, and one inch from the small curvature on the anterior wall of the stomach. There was no constriction of the stomach, and there were no other ulcers. The small intestines were glued together with recent lymph, but pale and not injected. Other viscera normal.

Case 2. A female servant, aged 29, was admitted to the same hospital, under the care of Dr. Malet, on June 1st, 1893, in the afternoon.

The previous history was not fully recorded, but she said that she had suffered from pain in the epigastrium after food for a considerable time, and had complained of this to her mistress ten days previously. Her illness had begun very suddenly with intense pain in the abdomen an hour or two after a hearty supper, three days before her admission to the hospital. During the next three days she vomited incessantly.

I saw her with the house physician about eight hours after admission. She was then in a state of collapse, but quite conscious. The face was pale and anxious, the pulse small and feeble. The abdomen was universally distended and tympanic, motionless during respiration, and rigid and tender to the touch. The history and symptoms pointed clearly to acute general peritonitis following perforation of a gastric ulcer. She died twelve hours after admission.

At the autopsy the abdomen was full of straw-coloured fluid, with much thick lymph in the pelvis. There was a perforation, the size of a threepenny-piece, in the anterior wall of the stomach close to the cardiac orifice and just below the small curvature. It was only just possible to draw the stomach sufficiently downwards and forwards to have sutured the perforation through a median incision above the umbilicus. The site of perforation was adherent to the under surface of the left lobe of the liver by recent soft lymph. The stomach, after removal from the body, had a well-marked hour-glass constriction at the level of the perforation, which, on opening the stomach, was found to be the floor of an ordinary funnel-

shaped chronic gastric ulcer with a somewhat thickened edge. There were no other ulcers.

Case 3. I was called to see the servant of a private patient, a girl aged 21, on October 21st, 1893, and obtained the following history, :—

For one month previously she had suffered from pain in the pit of the stomach, usually beginning about fifteen minutes after food and followed almost immediately by vomiting, after which the pain ceased. The pain began in the epigastrium, but was also felt in the back between the shoulders. This occurred about twice every day. On October 21st she had dined at 1.30 on cold fowl and potatoes and had no pain or vomiting afterwards. She did not have her usual meal at tea time. At 8 p.m., while standing up peeling potatoes, she was suddenly seized with intense pain beginning in the epigastrium and spreading all over the chest and between the shoulder blades. She felt faint and short of breath, but was just able to walk to the kitchen and sit down; she then walked up stairs to bed. Her mistress gave her a little brandy almost immediately after which she vomited. When first seen by me, an hour and a half after the attack, she was still in violent pain and very restless. The eyes were somewhat sunk and the pulse small and weak. The abdomen was not distended, but motionless, rigid, and extremely tender, especially in the upper part and epigastrium. She had begun to menstruate before the onset of the pain. She had been somewhat irregular for some months previously, but there had been no cessation of the menses. There was no pain over the lower part of the abdomen and nothing to suggest pelvic mischief, but no vaginal or rectal examination was made. Two-tenths of a grain of morphia were given. About ten minutes later she vomited violently and brought up a considerable quantity of half-digested food of a light colour. After repeating the dose of morphia the pain gradually became easier. On the following morning she was admitted to the hospital under the care of Dr. Malet, who concurred in the diagnosis of perforation of gastric ulcer and consequent peritonitis. On admission the

peritonitis appeared to be general, there being general tympanites and tenderness, and the whole abdominal wall being rigid and motionless during respiration. The aspect was anxious, the pulse small, and the temperature 101. The prognosis was considered extremely grave, and surgical intervention discussed but negatived. In spite of the unfavourable prognosis the girl made a gradual but uninterrupted recovery. She was kept moderately under the influence of morphia for the first few days and fed entirely by the rectum, nothing being given by the mouth till the seventh day, when a little milk was allowed and afterwards gradually increased. The vomiting was not repeated. On the fourth day there was only slight abdominal pain on moving and on deep respiration, and abdominal breathing had begun to return. The bowels were relieved by a simple enema on the second day, and on the fifth day a large offensive motion was passed spontaneously, after which the abdominal distension became much less. On the sixth day the abdomen was free from tenderness. No unfavorable symptom having appeared she was allowed to get up on the twenty-fifth day and was sent to a convalescent home a few days later, free from all gastric symptoms and eating ordinary food. She has since returned to her work as a general servant, and when last seen a week ago appeared and felt quite well, though she had recently twice had some return of the old epigastric pain.

Remarks.—The question of operating was discussed in each of the above cases. In the first an exploratory operation was decided on, but death occurred soon after admission before the operation could be carried out. The second case was considered too far advanced for operation, and death occurred twelve hours after admission. These two cases were admitted to the hospital—one four and the other three days after perforation—both practically in a dying state. The third case was seen within two hours after the onset of acute symptoms, and admitted to the hospital about twelve hours later. The history and symptoms pointed unequivocally to perforation of a gastric ulcer into the general peritoneal cavity, and resembled in

almost every particular those of the two preceding cases. Nevertheless, under purely medical treatment, she made a gradual but perfect recovery.

The question of operating for perforation of gastric ulcer must be decided by the possibility of diagnosis and by the prognosis, with and without operation respectively.

From a study of recorded cases, it would appear that the diagnosis is generally sufficiently evident, at any rate in those cases in which perforation occurs into the general peritoneal cavity. Of the three cases recorded above, the diagnosis in Case 1 would have been quite obvious if the facts of the previous history afterwards obtained from the patient's mother had been known. In Case 2 the diagnosis was made without difficulty and confirmed *post mortem*. In Case 3 absolute verification was of course impossible, but the history and signs were so unequivocal as to render the diagnosis in the highest degree probable.

Again, out of eight cases * which I have collected from recent medical literature (all, with one exception, since 1890) in which abdominal section was performed, the diagnosis of perforated gastric ulcer, made before operation, was verified in five, and probably accurate but not verified, in one (Mr. Barling's second case). In the other two (Mr. Barling's first case and Mr. Taylor's case) the diagnosis was only made in one case after death and in the other at the operation. In both these cases, however, the diagnosis of peritonitis was sufficiently clear to justify operation, although the particular viscus from which the peritonitis started was not evident. There is of course an obvious fallacy in judging from cases which have all been submitted to operation—namely, that usually only cases with a clear diagnosis have been selected. Nevertheless, I think it

* Barling, *Birm. Med. Review*, September, 1893 (three cases).

Haslam, *Brit. Med. Journal*, November, 1893.

H. Gilford, *Brit. Med. Journal*, 1893, vol. i., p. 944.

Taylor, *Brit. Med. Journal*, 1886.

Pinner, *Centralblatt f. Chirurgie*, 1893, p. 619.

Kriege, *ibid*, p. 331.

will be found that in those cases which are verified, not by operation but by *post mortem* examination, the diagnosis during life is generally clear in those in which perforation takes place into the general peritoneal cavity. These, as was long ago shewn by Brinton's statistics, are almost always cases in which the ulcer is situated in the anterior wall of the stomach, the most movable part of the organ and therefore the least liable to previous adhesion. In two out of the three cases here published, and in six out of the eight cases referred to, the perforation was in this position. When, however, the perforation occurs on the posterior surface, the diagnosis is not only oftener obscure, but the lesser fatality oftener prevents verification.

Lastly, even when the symptoms point clearly to acute peritonitis consequent on perforation of one of the hollow viscera, the absence of previous symptoms may sometimes render it difficult to localise the lesion. Previous history however pointed clearly to the stomach in the great majority of the cases referred to above, and close inquiry would probably considerably diminish the number of cases of entirely latent gastric ulcer. On the whole it may be concluded that the diagnosis of perforated gastric ulcer is generally clearer than that of most forms of acute abdominal mischief.

The mortality of this condition without operation it is of course only possible to guess. Probably Mr. Barling's estimate of 95 per cent. is not too high. That recovery under purely medical treatment may however occur is shewn conclusively by a case recorded by Fagge (*Medicine*, first edition, vol. ii., p. 244) in which the fact was verified by a subsequent autopsy two months later. He does not, unfortunately, state whether the ulcer was on the anterior or posterior surface of the stomach. Case 3, recorded above, is, I believe, another case in point, as conclusive as in the absence of an autopsy it can be. Nevertheless it must be admitted that medical treatment offers but a poor chance when perforation is accompanied by any considerable escape of stomach contents. Unfortunately, at present the mortality of cases of this kind treated by abdominal section

is not much more encouraging, but of the eight cases referred to above three are claimed as recoveries. Of these, Mr. Taylor's case died two months after the operation from intestinal obstruction due indirectly to the gastric ulcer. Mr. Barling's third case has already been alluded to. The operation consisted merely in the opening of a collection of pus behind the stomach twenty days after the sudden onset of symptoms pointing to the perforation of gastric ulcer, presumably on the posterior wall, an operation of course not comparable in difficulty with that for the immediate treatment of a perforated ulcer with acute general peritonitis. Lastly, the only case which I have been able to find in which gastrorraphy has been performed with success for perforated gastric ulcer is that of Kriege, in which a small perforation of a chronic gastric ulcer near the cardiac orifice in a man aged 41 was sutured sixteen hours after the onset of acute symptoms, and the man recovered after the formation and evacuation of a left empyema. In this case the amount of extravasation of gastric contents and consequent peritonitis were very slight and limited to the neighbourhood of the perforation.

A very near approach to a successful issue; in which the patient only succumbed to complications on the 3rd day, was made by Mr. Hastings Gilford, of Reading. In this, as also in two others out of the eight cases of operation, more than one ulcer was found *post mortem*. In spite however of the bare possibility of recovery without operation and of the at present discouraging results of operation, an improved technique and habitually earlier intervention hold out a better prospect of success than purely medical treatment.

With regard to the method of operating, a study of the measures actually adopted in the published cases has led me to the conclusion that in most of them too much time has been spent on suturing the stomach, and too little on emptying it of its remaining contents and thoroughly purifying the peritoneum. In the ordinary position of the perforation, near the cardiac orifice, the difficulties of suturing are very great, and the patient is seldom in a condition to stand a prolonged operation. The

first attention, after opening the abdomen above the umbilicus and verifying the perforation, should be devoted to emptying the stomach by a syphon-tube, introduced either through the perforation (as suggested by Mr. Barling) or through the œsophagus. A second incision should then be made above the pubes, and the abdominal cavity thoroughly flushed with warm water introduced alternately through either wound. In no other way is it possible to purify thoroughly both the upper and lower parts of the peritoneal cavity. Finally, a drain-tube should be passed to the bottom of the pelvic pouch and the gastric perforation shut off as completely as possible from the surrounding viscera by plugs of iodoform gauze, the ends of which, brought out through the wound, form an efficient drain. The security with which an abscess in a non-adherent liver may be both isolated and drained in this way, makes it probable that an opening into the previously emptied stomach could be treated not less successfully in a similar manner with a minimum expenditure of time, leaving, of course, a fistula, which might or might not require to be subsequently dealt with. It must be remembered that the patient is in danger of dying not because she has a hole in her stomach, but because the contents of it are in her peritoneal cavity. The first and most important need is to remove those contents, and to provide for drainage. When this has been thoroughly done, to do more is generally to sacrifice the patient to the pursuit of an abstract surgical ideal.

For permission to make use of the above cases I am indebted to the courtesy of Mr. Kough and Dr. Malet, of the Wolverhampton General Hospital.

PERISCOPE.

NERVOUS DISEASES.

BY C. W. SUCKLING, M.D.

The Therapeutic Influence of Testicular Liquid on the Animal Organism.—(Vide *Glasgow Medical Journal*, October, 1893.) In May, 1892, MM. Brown-Séquard and D'Arsonval arranged to supply the liquid organic extract gratuitously to medical men for the treatment of various affections. The following results have just been published.

1. Return of the normal condition in locomotor ataxia under the influence of testicular liquid, it being claimed that out of 342 cases of undoubted locomotor ataxia 314 were much improved or completely cured. The best results were obtained when a large dose (5 or 6 cc.) was injected daily.

2. In 117 cases of disseminated sclerosis treated, in 97 there was considerable benefit or almost complete cure.

3. Great amelioration was also produced in Friedreich's disease and myelitis.

4. Cerebral affections (hæmorrhage, softening, inflammation, mental disorders) were ameliorated. The course of general paralysis has not been modified.

5. Paralysis agitans: 25 out of 27 cases were improved and one case cured.

6. Neurasthenia, hysteria, chorea, and other functional nervous affections did not shew such good results as organic affections. Chorea was often cured.

7. Debility, senility: Much improvement took place in these cases.

Nitro-glycerine in Epileptic Paroxysms.—Dr. Bates (in the *New York Medical Journal*, July 29th) recommends the use of the nitrites as soon as possible after the commencement of the

aura or of the paroxysm. He injects $\frac{1}{100}$ gr. of nitro-glycerine, and he claims that this shortens the attack and lessens the after effects.

Sciatica.—By A. Symons Eccles, M.B. Macmillan and Co. The author gives clearly the differential diagnosis between neuralgia and neuritis.

NEURALGIA.

Onset usually sudden.
Pain intermittent.
Tenderness at certain points only.

Decrease of surface temperature not always present.
Tension may produce paroxysm or pain at tender points.
Temperature sense unaffected.

Muscular twitchings may occur during paroxysm.
No thickening of nerve sheath.
Associated with other neuralgias, especially facial.

NEURITIS.

More often gradual.
Pain continual.
Tenderness all along the course of the nerve.

Decrease of surface temperature always, cyanosis common.
Tension may ease pain, and causes thrill or numbness.
Temperature sense increased for heat.

Muscular paresis, atrophy, and R.D. occur.
Thickening may be felt.
Not associated with neuralgia elsewhere as a rule.

Dr. Eccles places little reliance on drugs in the treatment of sciatica, but recommends rest, warmth, massage, and electricity.

Tachycardia and Graves' Disease.—Tachycardia may exist by itself, being either persistent or paroxysmal, or it may occur in these two forms in Graves' disease. It occasions great mental distress, prostration, and dyspnoea. The temperature is often raised during the attacks. Complete mental and physical rest is necessary.

Unilateral Parkinsonian Tremor as a symptom of Tumour of the Cerebral Peduncle.—(*Le Progrès Médical*, June, 1893) translated in the *Glasgow Medical Journal*, August, 1893. Blocq and Marinesco record the case of a patient of Dr. Charcot who was the subject of tremor limited to the left side of the body. Its characters were precisely those of Parkinson's disease. The patient eventually died of pulmonary tuberculosis, and the autopsy revealed the presence of a mass of tubercle in the thickness of the right cerebral peduncle. Tubercles of the cerebral

peduncle are capable, without destroying the crusta, of giving rise to trembling, probably by irritating the pyramidal tract.

Craniectomy in Idiots.—(Translated in the *Practitioner*, Sept., 1893.) M. Bourneville has recently published a paper summing up the results of craniectomy in deficient or idiot children. The first surgeon who attempted the operation with a view to giving the brain more room for expansion was Dr. Fuller, of Montreal, in 1878. In 1890 Lannelongue took the matter up in Paris and operated on 25 micro-cephalic idiots. Since then there have been in all 56 operations by Horsley, Barlow and others. M. Bourneville considers that sufficient time has not elapsed to judge adequately of the results. He considers that the skull does not cramp the brain, but that the brain moulds the skull, and he states that the skulls of micro-cephalic idiots do not show any signs of premature ossification, and that operative openings would not give any considerable opportunity for the expansion of the brain if it had the capacity to grow further.

Dietetic Treatment of Graves' Disease.—Dr. Thomson recently read a paper before the New York Neurological Society relating a case in which satisfactory results were obtained by attention to diet. A change of diet effected what drugs had quite failed to do. A return to meat diet brought back a return of the disease, which was arrested by discontinuing meat and resuming milk; a second return to meat brought back a fatal return of the malady. Since this experience he has found that dietetic treatment has given such satisfactory results that he recommends a milk diet for the treatment of the complaint.

The Prognosis and Treatment of Chronic Alcoholism.—(*Vide Practitioner*, August, 1893.) Dr. Thomas Barlow says that three great factors, by means of which recovery takes place, are the withdrawal of alcohol, the administration of food, and time and the natural tendency to elimination and repair. Shampooing and galvanism are helpful in the middle and late stages, harmful in the early stages. Sunlight and bracing air and change of surroundings are invaluable.

The Diagnosis of Intra-cerebral Hæmorrhage.—In a paper by

Dr. Eskridge, of Denver, Col. (reported in the *Medical News*, September, 1893), the author gives a useful table of the most important diagnostic points of cerebral hæmorrhage and thrombotic softening.

THROMBOTIC SOFTENING.

1. Prodromata frequent.
2. Great degeneration of the arteries of the limbs.
3. Pulse soft and often very compressible.
4. Heart feeble, dilated, and irregular.
5. Coma less marked in depth and duration.
6. Following grief and other depressing influences.
7. Local convulsions more frequent.
8. Slight initial temperature disturbance.
9. Slight variation of the temperature within a few hours.
10. Secondary inflammatory symptoms frequent and well marked.

CEREBRAL HÆMORRHAGE.

1. Prodromata infrequent.
2. Turgid face and strongly beating arteries of the neck.
3. High arterial tension regardless of the size of the pulse.
4. Heart hypertrophied and beating strongly.
5. Coma more intense and longer in duration.
6. More likely to be induced by mental excitement.
7. General convulsions more frequent.
8. Often great initial temperature disturbance.
9. Often a considerable rise in temperature from twelve to twenty-four hours after the attack.
10. Secondary inflammatory symptoms less in frequency and degree.

Hysterical Aphonia.—By W. Scheppergrell, M.D., of New Orleans (*vide Medical News*, September, 1893). The voice is lost, but the patient can whisper, and an examination with the laryngoscope should be made and all organic causes excluded. In hysterical aphonia the whisper is natural, but in bilateral paralysis of the recurrent laryngeal nerve the whisper is laboured, with marked phonatory waste due to the inability of the patient to approximate the vocal bands. Cough is frequently present in hysterical aphonia, but is never found in true paralysis. In a doubtful case the administration of chloroform will clear the diagnosis, as the first stage of the anæsthesia will bring out the voice unless true paralysis exists. The prognosis in recent cases is good. In long-standing cases certain atrophic changes may take place in the muscles as a result of disease; but even these cases yield to careful treatment. The treatment should be both constitutional and local. Arsenic, strychnine, iron,

valerian, or the bromides may be used. The influence of ovarian or uterine disease should not be overlooked. The local treatment depends upon whether the case is acute or chronic. In recent cases the faradic current applied externally to the neck suffices. In chronic cases the application must be frequently repeated; and the galvanic current should also be used on account of its tonic effects upon the muscles, which have been weakened from disease. The negative electrode should be applied within the larynx, and the positive electrode externally over the larynx.

Paræsthetic Neurosis.—Dr. Collins, of New York, contributes a paper on this subject to the *Boston Medical and Surgical Journal*, September, 1893. He describes the various forms of perverted sensation which are complained of, and which especially affect the upper extremities. He notes anæmia, gout, and rheumatism, as causes, and calls attention to the great influence of occupation. Females were far more frequently affected than males, and the majority of them did washing, sewing, scrubbing, or crocheting. He classifies them as (1) Emotional, (2) Mental, (3) Neurasthenic, (4) Toxic, (5) Waking numbness, (6) Occupation numbness.

Bilateral Brachial Paralysis.—(*Boston Medical and Surgical Journal*.)—A case of Bilateral paralysis of the brachial plexuses recently occurred in Bernhardt's clinic in Berlin. A woman was operated on for a double salpingo-oophorectomy. During the operation, which lasted an hour, the arms were held rather forcibly up and back, and shortly after the operation it was found the woman had a double Erb's paralysis affecting almost identically the same muscles on each side. The infra- and supra-spinatus, the deltoid, biceps, brachialis, and both supinators were completely paralysed. Sensory disturbances in the skin also existed. The paralysis was due to the pressing of the clavicles upon the transverse processes of the sixth and seventh cervical vertebræ, thus compressing the plexuses between the bony parts.

THE BACTERIOLOGY OF CHOLERA.

We have received from the editors of *The Practitioner* a reprint of two articles appearing in the December number of that periodical, one of which we take to be editorial, the other being a translation of a paper, by Professor Köch, recently published in the *Zeitschrift für Hygiene und Infectious-Krankheiten*. The two articles taken together form a valuable summary of the views at present held with regard to the value of bacteriological examination in cases of suspected cholera, and of the various methods employed in making such examinations.

The pathologist to whom the material is submitted has, it is said, two methods of examination—naked-eye and bacteriological respectively—open to him; but, since all known facts are in favour of the conclusion that Koch's comma-bacillus is not found in the human subject except in the bowel-contents or discharges of patients suffering from Asiatic cholera, the latter method is the all-important one. The typical cholera bowel may, however, be recognised as being injected on both its surfaces, having large patches of its mucous membrane more or less completely denuded of epithelium, and containing rice-water-like fluid, and flakes of epithelium; whilst the typical cholera-stool consists of the same fluid, at the bottom of which the epithelial flakes collect and form a definite deposit.

Professor Koch's article contains a very clear account of the methods adopted in making a bacteriological examination, which, even in the most difficult cases, can, he says, in skilful hands, be completed in two days at the outside, and is often virtually decided in a few minutes. The procedure is briefly as follows.

Microscopical Examination. — A cover-glass preparation, stained with fuchsin, is made of the material to be examined. If a pure culture has been submitted, or one in which the cholera bacilli greatly outnumber the other germs present, the former will be seen in large numbers, usually arranged in little

heaps, and all lying in the same direction ; and the diagnosis may then at once be made. Even when this characteristic grouping is not observed, the recognition of comma-bacilli scattered amongst numerous bacteria coli is sufficient for the purposes of diagnosis. When, however, the varieties of bacteria become numerous, the microscopical examination is insufficient by itself ; whilst in all cases it is well to verify it by the other methods to be described. In 50 per cent. of the cases from which material was sent to the Berlin Institute for Infectious Diseases during the last cholera epidemic, an opinion was given, which further investigation only confirmed, based on the microscopical examination alone. The great importance of such a rapid method of investigation in the early periods of an epidemic is obvious.

Peptone Cultivation.—A sterilized solution of 1 per cent. peptone and 0·5 or 1 per cent. sodium chloride is inoculated with the suspected material, and the whole kept at a temperature of 37° C. In this solution, the comma-bacilli multiply far more rapidly than any of the other intestinal germs, and rise to the surface in an almost pure culture in about six or eight hours. Later on, they become freely mixed with bacteria coli. If on examining a specimen of this culture it be found still impure, subcultures on gelatine or agar plates must be made.

Gelatine Plate Cultivation.—Koch recommends that three dilutions of gelatine should be inoculated and kept steadily at a temperature of 22° C. In from fifteen to twenty hours characteristic colonies of bacilli are seen. These appear as small white points, around which liquefaction of the gelatine occurs, producing a funnel-shaped depression with a clear margin, in the centre of which is a granular grey or yellowish-grey mass ; later on, a pinkish tinge is seen at the margin of the colony.

Agar Plate Cultivation.—The procedure is the same as in the gelatine cultivation, except that the temperature may be raised to 37° C., and fairly large colonies can be obtained in from eight to ten hours. These colonies differ from those of all other bacteria likely to be met with, in possessing a peculiar light grey-brown transparent appearance.

Cholera red (Indol) Reaction.—This reaction is obtained by adding sulphuric acid to cholera cultivations. It depends upon the simultaneous production by these cultivations of indol and nitrous acid, two substances which together give a red colouration in the presence of sulphuric acid. No other curved bacteria produce both of these substances; but, since many produce one or the other, the cultivation to be tested must be a pure one.

Experiments on Animals.—Pure agar cultivations are introduced into the abdominal cavity of a guinea-pig, care being taken that the material is not injected into the intestine itself. The symptoms produced by the comma-bacilli are quite different from those due to any other known curved bacilli.

The above methods of investigation must be used to supplement and verify one another. Thus, even when the microscopical examination is of itself decisive, confirmation should be obtained by the various cultivation methods and the indol reaction. If, however, the results of the former are unsatisfactory, gelatine cultivations must be made, agar plates inoculated with early peptone cultivations, in such a manner as to obtain as large colonies as possible, and an opinion formed on the combined results, coupled with those of the indol test. Finally, in the most difficult cases, where the gelatine cultivations themselves are indeterminate, the diagnosis must depend upon the results of successive agar inoculations from an original peptone cultivation. It is only in these latter cases, where the comma-bacilli are very few in number compared with other intestinal germs, that the examination will occupy as much as two days before it is completed.

The following sentence of Professor Koch's article is worth quoting in full: "Constant practice and a full mastery of the *technique* of bacteriology is essential, especially in this new and more complicated method of procedure, and it is therefore not superfluous to lay emphasis on the fact that everyone who has to diagnose cholera bacteriologically had better give up the examination unless he has been able to acquire the knowledge and practice essential for the work."

With regard to the absolute value in all cases of the bacteriological examination, the two articles differ somewhat from one another in their tone. Thus, Professor Koch lays down the law that "everyone must agree that in every case where these bacteria occur Asiatic cholera must be present," and speaks almost with contempt of those who have still any doubts as to the causal relation between the comma-bacilli and cholera. The English article, on the other hand, admits some unsatisfactoriness, from the point of view of the public health authorities, even in the positive evidence obtained by bacteriological research, owing to the not very infrequent absence of anything characteristic of Asiatic cholera in the history or symptoms of the case; and speaks with still greater hesitation as to the reliance to be placed in many cases on such evidence when negative in character.

In this relation, some important information is given as to the decisions arrived at by the Medical Department of the Local Government Board in the recent epidemic, and the language in which these decisions were couched. It appears that whenever comma-bacilli were found in large and overwhelming numbers in the materials submitted for examination, the authority forwarding them was at once informed that the case was one of true cholera, although, when the history or symptoms threw doubt upon the diagnosis, the words "indistinguishable bacteriologically from one of true cholera" were used. Not unfrequently, however, the material differed widely in appearance from that of the typical cholera stool, either in consisting of semi-fæculent matter, or in containing "mucus flakes" instead of the usual epithelial *débris*. In such cases the comma-bacilli are often few in number, and altogether overwhelmed by the other germs present. Under these circumstances, when once the characteristic bacilli had been found, the authority was simply informed of the fact, and the decision as to whether or no the usual precautions should be taken was left entirely in his hands.

We cannot help thinking that, with our present knowledge, it

is wise to assume for practical purposes the truth of Professor Koch's proposition that the presence of comma-bacilli in the discharges proves the case to have been one of Asiatic cholera ; and we do not doubt that this is the assumption on which action is taken by the public health authorities in the great majority of cases.

REPORTS OF SOCIETIES.

BRITISH MEDICAL ASSOCIATION.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

The third meeting of the Session 1893-4, was held on Thursday, the 14th December, 1893. The President (Dr. RICKARDS) in the chair. There were 39 members present.

Mr. Claude E. Wilmot, M.B., B.Ch, was elected a member of the Association and Branch.

Dr. Simon read a paper on Pneumonia.

Peritoneal Hæmorrhagic Cyst.—Mr. Barling shewed a male patient, aged 53, upon whom he had operated three months previously. The cyst had commenced six months before this, apparently in the epigastrium, and had extended downwards. The history gave no account of any injury to the abdomen, although it is possible such may have been sustained in patient's work as a blacksmith, shoeing horses. Three weeks' pain in the epigastrium preceded the appearance of the tumour, and up to the time of admission there was loss of weight. The cyst occupied the central part of the abdomen, extending about as far below as it did above the umbilicus ; it was dull, fluctuating, moved somewhat with deep inspiration, but its base was quite fixed. When the abdomen was opened the cyst was found partly adherent in front to parietal peritoneum and great omen-

tum. Incision evacuated between seven and eight pints of blood stained fluid and the cyst wall, which was thickly lined with old blood-clot, was fixed in front of the vertebræ. Examination of the fluid shewed the absence of amylolytic ferment, of urea, and of hydatid elements. The incision was stitched to the parietal wound, and the patient has done well since, having gained a stone in weight in the last two months ; but there is still a deep sinus left. Mr. Barling regarded the cyst as originating in a hæmorrhage at the base of the mesentery.

Specimens.—Mr. Haslam shewed a specimen of a separation of the lower epiphysis of the femur which had been complicated with rupture of the inner and middle coats of the popliteal artery and bruising of the vein, causing gangrene of the limb. The patient, a boy aged 19, was in front of some small trucks loaded with coal that were descending an incline, his back was placed against the foremost truck, and by pressing backwards he was able to regulate the pace at which they were descending, though not to actually stop them. Suddenly his left foot became fixed in the points of the lines, and the momentum of the trucks behind him was so great that his leg was forcibly displaced outwards at the knee until it was at a right angle with the thigh. When the leg was brought into a line with the thigh again it was found to be shorter than the opposite one to the extent of an inch and a half ; the tibia and fibula were, with the lower epiphysis of the femur, carried forwards, inwards, and upwards ; the lower end of the shaft was projecting backwards and outwards into the popliteal space, and its outer angle was nearly through the skin on the outer side of the limb ; there was no pulsation in the posterior tibial artery. Reduction was effected with difficulty, but the limb became gangrenous and was amputated on the sixth day. On examination the lower epiphysis of the femur was found to be completely separated from the shaft of the bone, there was effusion into the knee-joint, the tissues in the popliteal space were greatly bruised, and the artery contained a firm clot ; on slitting the vessel open this was found to be caused by an extensive laceration of its inner

and middle coats. The vein for a distance of about an inch was much bruised, and its coats and lining membrane altered in consistence and appearance; its lumen was obstructed at this point by a clot about an inch and a half long. This case illustrates in a marked degree the extreme gravity of this form of lesion, where, owing to the displacement forwards of the lower fragment, the vessels are not only stretched, but their coats subjected to injury by the sharp margin of the lower end of the shaft.

Mr. Lawson Tait exhibited an interesting specimen of leaking pyosalpinx which gave evidence of having originated in a tubal pregnancy of very early date, and it illustrated a not unusual form of the secondary dangers of this condition. Probably the fœtus had died previous to the time of rupture, as there was no history of rupture. The infundibulum seems to have been originally glued on to the ovary, and to have again been separated by the process of suppuration, for at the point of junction was a small aperture, at which the leaking was taking place. The patient had no definite symptoms save constant pain, high fever, and rapid emaciation, this having gone on for about six weeks. Dr. M'Munn, whose patient she was, arrived at a conclusion that something must be wrong in the pelvis by a process of exclusion, and the discovery, on one occasion, of a small floating mass. In consultation, Mr. Lawson Tait expressed the opinion that the movable mass could only be an occluded tube, and that it was probably a case of pyosalpinx without adhesions, as Dr. M'Munn made more than one examination without discovering the lump. Mr. Tait advised immediate abdominal section, though the patient was extremely ill and delirious; and this was done. She did not recover from the delirium for six days; but now all her symptoms are gone, and she has a good appetite and is rapidly recovering.

Malignant Stricture of Œsophagus; gastrostomy; death from exhaustion six days later.—Mr. F. Marsh shewed this specimen, and related the history of the case. The patient, a man æt. 54, was admitted into the Queen's Hospital on November 27th,

1893. He had suffered from dysphagia for about six months; for some weeks he had only been able to swallow fluids, and for some days he had not even been able to accomplish this. Nutrient enemata had been regularly given for about a month. He was much emaciated, and had become very feeble. On examination with bougies directly after admission, a slight stricture, easily passed, was felt at the commencement of the œsophagus, and a second, quite impassable, at a point ten and a half inches from the teeth. An attempt made the next day to pass a Symond's short feeding tube of small size was apparently successful: fluids slowly swallowed passed into the stomach, and a fair amount of nourishment was taken during the next two days. On the third day the tube was withdrawn, and it was then found that instead of going through the stricture, it had been doubled up on itself above it. Further attempts to introduce a tube having failed, gastrostomy was decided upon, although the prospect of a successful result was not a hopeful one, the patient's temperature being 96° F. and his general condition far from good. The first stage of the operation was performed on December 1st. An incision parallel to the left costal margin was employed, and the stomach was fixed in the wound by two hare-lip pins, supplemented by a few carbolised silk sutures. The patient rallied well from the operation. The following day, as nutrient enemata could not be retained, the second stage of the operation was performed, and the patient fed every two hours with peptonised food. The wound was dusted with carbonate of bismuth to neutralise any gastric juice finding its way therein, but at no time was there any escape of the contents of the stomach, either through or round the tube. For a few days there was some improvement in the patient's condition, but on December 6th, death from exhaustion took place. A *post mortem* examination shewed that there was no organic lesion at the commencement of the œsophagus, the resistance felt there during life having been due therefore to spasm, but at the second point there was a schirrus carcinoma causing a dense tubular stricture

almost occluding the lumen for nearly two inches. The adhesions between the stomach and the margins of the wound were fairly firm, and the site of the opening was on the anterior surface, near the cardiac end of the greater curvature. The results of the "technique" of the operation were in every way satisfactory, and it is a matter of regret that the case was one of the many too late ones.

Papillomatous Tumour—Mr. Jordan Lloyd shewed a papillomatous tumour as large as a hazel nut, which had been passed per urethram by a man aged 35 years, and also the "parent" tumour the size of a pigeon's egg which had been removed by suprapubic cystotomy. The patient had paroxysmal hæmaturia with attacks of retention for ten months. The growth was cut away with a stout nasal polypus snare, and the bladder and wound sutured with catgut. Urine was passed per urethram the day following the operation, and a rapid and uncomplicated recovery followed.

Fœtal Head extracted by Cephalotribe.—Dr. Purslow shewed a foetal head extracted by cephalotribe. The foetus, which was fully developed but much decomposed, presented by the breech, and in endeavouring to deliver the head, which was arrested at the brim, the neck gave way, leaving the head in the uterus. When Dr. Purslow saw the case, in consultation, four hours later, the uterus was firmly contracted on the head, which was high up above the brim. After very considerable difficulty, extraction was effected by the cephalotribe, the blades having to be removed and reapplied several times before they obtained a good grasp of the head, and the lock being then more than two inches within the vulva. Patient made a good recovery.

The fourth meeting of the Session 1893-94 was held at the Medical Institute on Thursday, January 11th, 1894, DR. SAUNDBY, F.R.C.P., in the Chair.

Mr. Thomas B. Carlyon, of Tenbury, was elected a member of the Branch.

Mr. Jordan Lloyd shewed two cases bearing upon his paper and referred to in it.

Wound of Axillary Artery and Division of Musculo-spinal Nerve.—Mr. Barling shewed a young man who was admitted to the General Hospital in May, 1893, with a stab wound in the posterior fold of the axilla. There had been severe loss of blood, the upper arm was greatly swollen, the whole of the extremity was quite cold, and pulsation was absent from the brachial and forearm arteries. No movements of the limb could be made below the shoulder. The wound was so deep that it seemed inadvisable to search for any bleeding vessel at the bottom of it, and the third part of the axillary artery was thereupon exposed from the front and was found to be about two-thirds divided. A ligature was placed above and below the opening and the artery cut through between them. The next day it was found that the patient had paralysis of all the muscles supplied by the musculo-spinal nerve. The artery healed well, but the musculo-spinal group remained paralysed. The question of exposing and suturing the nerve was considered, but operation was deferred. At the present time the paralysis has entirely passed away and the patient has resumed work.

Uterus and Placenta removed by Porro's operation.—Mr. Jordan shewed a uterus and placenta removed by Porro's operation. The patient, aged 30, had a large, soft, rapidly-growing cancer of the rectum, the upper limit of which could not be felt. She had been twelve hours in labour when operated on, no advance had been made, and she was in great pain. Per vaginam, the cervix could not be felt, being pushed up so by the cancer of the rectum. The operation was on December 14th, and since that date the highest temperature recorded has been 99° F., the abdomen has been quite soft, and her condition has distinctly been improved by the operation. Unfortunately, the cancer is too high up for removal, and she will in the end die from exhaustion. The child, an eight-months one, only lived a few minutes.

Complete separation of the shaft of the Tibia from the upper Epiphysis.—Mr. F. Marsh shewed this specimen, taken (*post mortem*) from a youth, æt. 17, who had been caught in the belt of a machine, and had received the following injuries:—The left arm was almost torn off above the elbow joint, and there was a compound fracture of the humerus in its upper third; the right radius and ulna were badly comminuted; the right femur was fractured; the tissues over the heel and sole of the left foot were stripped off, and the os calcis was split into several pieces; the shaft of the left tibia was separated from the upper epiphysis and displaced backwards (easily reducible and reproduceable); the head, trunk, and extremities were extensively bruised.

Amputation through the injured neck of the left humerus, and supra-malleolar amputation of the left foot was performed. The patient rallied fairly well for a time, but died 36 hours afterwards, apparently from shock.

Post mortem examination shewed that only the injuries enumerated above had been received; that the separation at the line of the epiphysis was complete; that the left knee joint was uninjured; and that the left fibula was intact.

Mr. Marsh pointed out the extreme rarity of the specimen, and the difficulty in this instance (the fibula being intact) of satisfactorily explaining the mechanism of the separation.

Splint.—Mr. Leedham Green shewed a splint for excision of the ankle. It was merely a modified "Esmarch," the difference being that whereas Esmarch's splint stops short of the knee, Mr. Green's is carried on to the groin. The knee is further fixed by a back-splint of "Gooching." The advantages of this slight modification are (1) that the splint is more firmly fastened to the limb, and (2) that the knee is fixed. The importance of the latter is obvious. The splint may either be fixed on the limb with a plaster of Paris bandage, or, more conveniently and quite as firmly, by using broad strips of strong strapping-plaster and then a bandage. The foot is strapped to the foot-piece in the usual manner, and the whole limb is raised on an inclined plane.

Papers.—Dr. E. N. Nason read a paper on the “Antiseptic Treatment of Typhoid Fever,” which will be published next month.

Mr. Jordan Lloyd read a paper on “Primary Cancer of the Floor of the Mouth.”

REVIEWS.

ANÆSTHETICS AND THEIR ADMINISTRATION.*

THIS book is intended as a manual for medical and dental practitioners and students. It can safely be recommended as the best work in the English language on this most important subject for practitioners; for students it is far too advanced. Its value is enhanced by the fact that it is written by one who is a well-known teacher of anæsthetics; it is also essentially a clinical and practical treatise. A series of forty-two cases are given, illustrative of the various anæsthetics and the difficulties actually met with by the author, with the appropriate treatment to be used for overcoming them.

The first chapter is devoted to the consideration of the properties and impurities of the chief agents. Pure ether is to be preferred to the methylated. It produces less irritation, less mucus, less respiratory difficulty, and less after-nausea and vomiting. The vapour is less disagreeable. The period of recovery is stated to be longer after the use of the methylated than pure ether, owing to the impurities contained in the former.

* *Anæsthetics and their Administration.* By Frederick W. Hewett, M.A., M.D. Cantab. Anæsthetist and Instructor in Anæsthetics at the London Hospital; Anæsthetist and Lecturer on Anæsthetics at Charing Cross Hospital; Anæsthetist at the Dental Hospital, and at the National Orthopaedic Hospital. Charles Griffin and Co.

We entirely agree with the statement at the commencement of the book that ether should be our "routine anæsthetic" for general surgical work. Exception may be taken by some to the statement that "the use of chloroform for patients between certain ages and of ether for patients at other periods of life cannot be regarded as rational. The selection of the anæsthetic must be regulated more by the physical condition and temperament of the patient and the length and nature of the operation than by age. General anæsthetics may be given to patients of all ages." Again, "it is a mistake to suppose that children are not as susceptible as adults to the toxic effects of chloroform, and that with them fatalities are practically unknown."

The writer goes on to remark that more fatalities under chloroform have been recorded than might have been imagined. When ether is properly and carefully given to children they take it far better than is generally believed. Mr. Woodhouse Braine administers ether to children with the best results. He employs small cones of lint, and drops the ether upon the lint. Mr. Hewett states that he has often followed this practice, and believes that when care is taken there is very little risk of bronchitis supervening. Patients advanced in years take anæsthetics often better than middle-aged or more vigorous subjects. This chapter on the general condition of the patient contains many valuable and interesting remarks. In many cases in which ether cannot be given the A. C. E. mixture is recommended. Speaking of the effects which may be produced upon the anæsthetised patient by the operation itself, he states the well-known fact that the greater the quantity of blood lost, the less will be the quantity of anæsthetic required. Again, he points out the fact that in certain cases, independently of the anæsthetic and independently too of hæmorrhage or of prolonged surgical interference, symptoms of cardiac depression make their appearance. Death from cardiac syncope may take place at the moment of the first incision; it also seems to be more common under chloroform than under ether or nitrous

oxide. In parturition, chloroform is the best anæsthetic; but when true surgical anæsthesia is required, as for turning, craniotomy, etc., ether should, as a general rule, be given.

Statistics collected by Drs. Ormsby and Julliard are given, shewing that in over a million administrations ether was five times safer than chloroform. The administration of nitrous oxide, or A.C.E., is recommended before ether, in order to spare the patient the initial discomfort of etherisation. The early morning (8 a.m. to 9 a.m.) is the best time for the administration of an anæsthetic for a surgical operation. Tracheotomy instruments should always be at hand. The careful directions given for administering nitrous oxide ought to be of great value to dental practitioners. The risk of catarrhal and bronchial affections is probably greater in administering ether by the open than by the close method. It will be surprising to many anæsthetists that Mr. Hewett seems to prefer Ormsby's inhaler to Clover's.

In regard to the depth of anæsthesia required for surgical operations, everyone will agree with the statement that the patient has to be kept as lightly under ether as is compatible with perfect tranquillity and anæsthesia. The anæsthetist has to find out his landmarks in the particular case before him by carefully observing the effects produced by more and less ether upon (*a*) the respiration, (*b*) the occurrence of swallowing movements, (*c*) the lid reflex, (*d*) the pupils. Of all the guides as to the depth of anæsthesia, respiration is by far the most satisfactory. Transient vomiting is the rule rather than the exception, but is less likely to be induced by giving the purest ether than by that prepared from methylated spirit.

Chloroform is best administered either by means of a Skinner's mask, a piece of lint, or the corner of a towel drawn through a safety pin, and not by a closed inhaler. Mr. Hewett states, in speaking of the effects of an overdose, that failure of the circulation, as recognised by the absence of the wrist pulse, "may" precede stoppage of breathing. We would go further,

and say that it *does* precede stoppage of breathing. Clonic movements affecting the arms during the second stage of anæsthesia should be regarded as a danger-signal. He thinks they are due to spasm of the pectoral muscles, and strongly indicate the necessity for air. These movements are most conspicuous when the arms are hanging down on each side of the operating table.

The author speaks well of the A.C.E. mixture, agreeing with our experience that it is the best anæsthetic for patients with advanced emphysema and bronchitis, attended with fatty degeneration and dilation of the heart. Bichloride of methylene is not recommended, in spite of Sir Spencer Wells' opinion. Cases are quoted shewing that although the use of morphine in conjunction with general anæsthetics is of distinct value in many cases, weighty objections to its routine employment undoubtedly exist.

Part III., which is devoted to the consideration of the management and treatment of the difficulties, accidents, and dangers of general anæsthesia, is well worthy of careful reading. After considering the various measures of resuscitation he comes to the conclusion that, after all, the most important is artificial respiration. To inject ether into patients already under its influence is obviously worse than useless. Very thin slices of lemon are recommended for relieving the disagreeable taste left after the inhalation of ether. In conclusion, there can be no doubt that the book before us is the very best that has been written on this subject.

AN INTRODUCTION TO THE CATALOGUE OF A COLLECTION OF CALCULI OF THE BLADDER.*

THE splendid collection of bladder stones removed by Sir Henry Thompson was presented by him in 1892 to the Hunterian Museum of the Royal College of Surgeons in London. The collection is now in that Museum duly catalogued, and in the pamphlet of about forty pages before us we have an analysis of the cases presented and a valuable summary of the lessons they teach.

An abstract from the catalogue is given, shewing that each case is numbered and that certain details are given of it, viz., the date of operation and its nature, the age and initials of the patient, the nature and number of the calculi, the result of the operation, and a few lines as to anything remarkable in the operation, and the patient's future.

A brief *résumé* is given of the development of the modern operation of Lithotrity and of Supra-pubic Lithotomy. Then comes what is most interesting of all, the results of the operations, shewing the comparative mortality of the various operations in adult males, in youths and boys, and in female patients. Each of these is again subdivided into patients operated on in hospital and in private. Taking these altogether we find that of a total of 844 operations by Lithotrity (multiple and single sittings) in adult males, 49 patients died. In the same class of patients 115 perinæal lithotomies gave rise to 42 deaths, and 17 supra-pubic lithotomies on the modern method gave rise to four deaths. Later, on page 33, we have figures more valuable still. All the cases of lithotrity *at one* sitting, 372 in number, are grouped together and shew only 12 deaths, or a mortality of 3·22 per cent.; a truly splendid result, especially when we remember that they include cases at all ages and that minute

* An Introduction to the Catalogue of the Collection of Calculi of the Bladder, upwards of one thousand in number, removed by operation by Sir Henry Thompson. F.R.C.S., M.B. Lond. London: J. and A. Churchill.

concretions, weighing less than twenty grains, are excluded from the calculation.

Lastly, we have a short study of the causes of mortality in all the fatal cases.

This introduction is well worthy of a perusal by those interested in the surgery of the bladder.

TUMOURS, INNOCENT AND MALIGNANT.*

MR. BLAND SUTTON is so well known, and has earned for himself such a reputation for original research in the domain of human and comparative pathology, that we naturally welcome any fresh work on the subject from his pen. The present volume on "Tumours, Innocent and Malignant," amply fulfils our expectations, and forms a welcome addition to our literature.

The first seventeen chapters deal with connective tissue tumours. Firstly, the innocent ones—fibromata, osteomata, lipomata, etc.—are described from the clinical as well as the pathological standpoint. A long chapter of some eighteen pages is devoted to the subject of odontomata. Considering the extreme variety of such tumours, their pathology is given in some detail. The different varieties of sarcoma are described and discussed. We are glad to see Mr. Sutton, in discussing the treatment of renal sarcomata in children, strongly deprecates any attempt at their removal.

The next section of the book deals with epithelial tumours. Chapters are devoted to the various malignant epithelial growths as they affect different organs, and the appropriate treatment in each case is touched upon.

The most original and instructive part of the volume, however, is that devoted to dermoids and to cysts of all kinds.

* Tumours, Innocent and Malignant; their Clinical Features and Appropriate Treatment. By J. Bland Sutton, Assistant-surgeon to the Middlesex Hospital. London: Cassell and Co. 1893.

This is a subject to which Mr. Sutton has devoted much care and labour, and his special knowledge enables him to shew us in quite a new light, and invest with quite a new interest, several obscure and imperfectly understood developmental tumours.

The work is copiously illustrated. The illustrations and plates are all admirable, and greatly enhance the value of the book.

MYXŒDEMA: AND THE EFFECTS OF CLIMATE
ON THE DISEASE.*

THIS is a short summary of the facts at present known with regard to the pathology, symptoms, and treatment of myxœdema, occupying the modest space of 36 small pages, and printed in large and clear type. Whether there is any demand for the production of such a book we may fairly doubt; but it is certainly well-written, and leaves one with a very clear mental picture of a typical case of the disease. The value of the book would have been increased to the general practitioner, for whom it is avowedly written, had some attention been devoted to the difficulties often met with in diagnosing an early case, and fuller details given as to the mode of administration of the thyroid gland or extract.

The last few pages deal with the modifications in the symptoms which are to be expected when the disease occurs in, or is transferred to a warm climate. That, under these circumstances, the usual unpleasant sensations of cold will probably be exchanged for those of warmth seems to be shewn by the cases quoted in this portion of the book.

* Myxœdema: and the Effects of Climate on the Disease. By A. Marius Wilson, M.D., B.S. Durh., L.R.C.P. Lond., M.R.C.S. Eng. London: The Scientific Press Limited.

SCIATIC NEURITIS.*

THERE is not much that is new in this monograph, a large part of which is devoted to a recapitulation of the principal facts concerning the general pathology of neuritis. The author's idea, however, that the nutrition of the spinal nerve trunks depends, not upon their own connection with the ganglia on the posterior roots and the cells of the anterior cornua, but upon the existence in connection with these centres of separate fibres "which have a special influence upon the nutritive process going on in the nerve structures," is certainly novel. The most important and practical point in the book is the insistence on the beneficial effect of massage and electricity in the treatment of sciatica, a point with which most practitioners will fully agree.

ESSENTIALS OF MINOR SURGERY.†

THE production of a second edition of this manual is a proof that it has proved useful to those for whom it was written. The arrangement of the matter in the form of question and answer is a somewhat unusual one, but it has the advantage of attracting the attention of the reader, and impressing facts on his memory in a very forcible manner. The answers to the various questions are remarkably clear and concise, and they contain a large amount of information condensed in a very small space. Such a book must be valuable not only to those beginning the study of surgery, but to dressers, house surgeons, and others engaged in its practice.

* Sciatic Neuritis : its Pathology and Treatment. By Robert Simpson, L.R.C.P., L.R.C.S. Bristol : John Wright and Co.

† Essentials of Minor Surgery. Bandaging, and Venereal Diseases. By Edward Martin, A.M., M.D. Philadelphia : W. B. Saunders. 1893.

CATALOGUE OF THE UNITED STATES' ARMY
LIBRARY.*

WE have received the fourteenth volume of this Index Catalogue. The enormous amount of labour involved in preparing this volume alone is shewn by the fact that, in addition to the author-titles of 6,426 volumes and 8,850 pamphlets, it contains 9,867 subject-titles of books and pamphlets, and 38,461 titles of articles in periodicals. It is therefore not only a catalogue of a particular library, but a most valuable index of medical literature.

ELEVENTH INTERNATIONAL MEDICAL CONGRESS

ROME, MARCH 29th-APRIL 5th, 1894.

We are informed that Messrs. Thomas Cook and Son, of Ludgate Circus, London, have been appointed the official agents for travelling arrangements for the Congress, and that they have made arrangements for special cheap return tickets to Rome for members of the medical profession and friends attending the meetings. At the request of the Central Committee, they have also arranged to reserve hotel accommodation in Rome for delegates and friends at rates varying from 10s. to 20s. per day, or higher if superior apartments are required. Owing to the large attendance which is expected, they cannot undertake to guarantee accommodation at hotels unless an application be received on or before February 15th, stating the number of days for which such accommodation will be required, the number of rooms and beds desired, and the approximate rate per day that will be paid. They will, however, do their

* Index Catalogue of the Library of the Surgeon-General's Office, United States Army. Vol. xiv. Washington : Government Printing Office 1893.

best to meet the wishes of those delegates who cannot give their decision prior to this date. For information concerning specially conducted tours, application should be made to their office in Ludgate Circus.

PUBLISHERS' DEPARTMENT.

New Inventions, Drugs, etc.

ANGLO-SWISS CONDENSED MILK.—We have received several samples of the "Milkmaid" brand of condensed milk prepared by the Anglo-Swiss Condensed Milk Company, with some of which are mixed coffee, cocoa, or chocolate, in such proportions as to make a very palatable drink when treated with boiling water. The claim is made for this brand that it is prepared only from pure, unskimmed and unadulterated milk, and copies of analyses made on behalf of the *British Medical Journal* vouch for the genuineness of the claim. The fact that the whole of the fat of the original milk is contained in the condensed product is one of great importance from the point of view of the artificial feeding of infants, when it is remembered that many of the other brands now in the market are made from milk that has been previously skimmed. We may also point out that the nature of the agreement entered into by the farmers supplying the company practically ensures the use of none but the best and purest milk obtainable.

TABLOIDS, ETC.—The following samples have been received from Messrs. Burroughs and Wellcome :—Compressed Ferruginous Tabloids (Blaud's), and Tabloids of Compressed Powdered Ipecacuanha. The former constitute an agreeable preparation of Blaud's well-known formula, in which the ferrous carbonate is formed fresh, and therefore in an unoxidised condition, in

the gastric juice. Each of the latter contains five grains of ipecacuanha from which the emetic constituent has been entirely removed ; they would therefore provide a valuable means of administering the drug in large doses in the treatment of dysentery. OIL OF EUCALYPTUS.—This preparation is obtained by distillation from the leaves only, and is believed to contain an unusually large percentage of eucalyptol. LANOLINE PINE TAR SOAP is said to contain an excess of natural fat, and so to keep the skin soft and free from cracks. Its somewhat strong tarry odour may be considered by some to form an objection to its use, but we notice that this very rapidly passes away.

New Books, etc., Received.

- Syllabus of Lectures on the Practice of Surgery. By N. SENN, M.D., Ph.D., LL.D. Chicago ; Professor of Surgery and Clinical Surgery in Rush Medical College. Philadelphia : W. B. Saunders. 1894.
- Essentials of Practice of Medicine, arranged in the form of Questions and Answers. By HENRY MORRIS, M.D., Visiting Physician to St. Joseph's Hospital, Philadelphia. Philadelphia : W. B. Saunders. 1894.
- Stammering, its Nature and Treatment By EMIL BEHNKE. London : J. Fisher Unwin. 1893.
- Index Catalogue of the Library of the Surgeon-General's Office, United States Army. Vol xiv. Washington : Government Printing Office. 1893.
- Headache and other Morbid Cephalic Sensations. By HARRY CAMPBELL, M.D., B.S. Lond. M.R.C.P. ; Physician to the North-west London Hospital. London : H. K. Lewis. 1894.
- An Introduction to Midwifery. By ARCHIBALD DONALD, M.A., M.D., C.M. Edin. M.R.C.P. ; Surgeon to St. Mary's Hospital for Women and Children. Manchester. London : Charles Griffin and Co. Limited. 1894.
- Aids to the Diagnosis and Treatment of Diseases of Children (Medical). By JOHN MCCAW, M.D., L.R.C.P., Physician to the Belfast Hospital for Sick Children. London : Baillière, Tindall, and Cox. 1893.
- Aids to Otology. By W. R. H. STEWART, F.R.C.S.E., Aural Surgeon to the Great Northern Central Hospital. London : Baillière, Tindall, and Cox. 1893.
- Diphtheria and its Treatment. By BROWNLOW R. MARTIN, A.B., M.B. Dublin, L.R.C.S. Ireland. London : Baillière, Tindall, and Cox. 1894.

- Antiseptics in Midwifery. By ROBERT BONALL, M.D. Cantab., M.R.C.P. Lond., Assistant Obstetric Physician to, and Lecturer on Practical Midwifery at, the Middlesex Hospital. London: H. K. Lewis. 1894.
- Infectious Diseases—Notification and Prevention. By LOUIS C. PARKES, M.D. Lond., D.P.H., Lecturer on Public Health at St. George's Hospital. London: H. K. Lewis. 1894.
- On Common Neuroses. By JAMES FREDERIC GOODHART, M.D. Aberd., F.R.C.P., Physician to Guy's Hospital. Second edition. London: H. K. Lewis. 1894.
- Transactions of the Royal Academy of Medicine in Ireland. Edited by WILLIAM THOMSON, M.A., F.R.C.S., General Secretary; Surgeon to the Richmond Hospital, Dublin. Dublin: Fannin and Co. 1893.
- Women: their Probable Place and Prospects in the Twentieth Century. By Sir DYCE DUCKWORTH, M.D., LL.D., Physician to, and Lecturer on Medicine in, St. Bartholomew's Hospital. Glasgow: Jas. Maclehose and Sons. 1894.
- The Lunacy Administration of Scotland, 1857-1892. By T. S. CLOUSTON, M.D., Physician-Superintendent, Royal Edinburgh Asylum, Morning-side.
- The Mental Symptoms of Myxedema, and the Effect on them of the Thyroid Treatment. By T. S. CLOUSTON, M.D. Lewes: South Counties Press Limited. 1894.

* * * Authors can have reprints of articles at the following rates:—

Not exceeding 8 pages	...	8/-	per 100
„ 16 „	...	12/6	„

The re-arranging of the type is the principal cost in the production of these reprints, so that smaller numbers will be the same price. Larger numbers at a proportionate reduction.

The Subscription (prepaid) to the *Birmingham Medical Review* is 6s. per annum, post free.

NOTICE.—*All Communications should be addressed to the Printers and Publishers, Messrs. Hall and English, 71, High Street, Birmingham.*

THE
BIRMINGHAM MEDICAL REVIEW.
MARCH, 1894.

ORIGINAL COMMUNICATIONS.

CLINICAL LECTURE ON
A CASE OF ECZEMA AND ITS TREATMENT.*

BY ALFRED H. CARTER, M.D. LOND, F.R.C.P.,
SENIOR PHYSICIAN TO THE QUEEN'S HOSPITAL, BIRMINGHAM, ETC.

Gentlemen,

The case which I am about to comment upon is that of a lad, aged 17 years, who has for several months past been troubled with an inflammatory eruption, which, beginning in the pinnæ of his ears, afterwards symmetrically involved the greater part of his face, and has now extended to his neck in a slighter degree. The backs of his fingers, hands, and wrists are also invaded by an eruption which is essentially the same as that upon the face, but much less acutely inflamed. The eruption throughout is mainly of a papular type; but while on the face the papules are bright red in colour and the intervals between them red, raw, and oozing, those upon the hands are only slightly reddened, and the skin of the part is dry, thickened, and somewhat scaly. The inflamed areas of skin upon the face and hands are not well defined, but merge gradually into the surrounding healthy skin. There are also long linear excoriations about the neck, which are evidently produced by scratching, and shew that the eruption is irritable. He had a similar attack when he

* Delivered at the Queen's Hospital, February 8th, 1894.

was 13 years of age from which he soon recovered under treatment at this Hospital.

His tongue is coated, his breath is offensive, and the action of his bowels is irregular. He has been very liable to "bilious attacks" all his life. He is pale, nervous, depressed, and irritable; he soon gets tired, and sweats easily; he sleeps fairly well, but is not refreshed on awaking; he has lost flesh; his urine is "strong" and frequently "goes thick on standing." He has never had acute rheumatism, but occasionally suffers from rheumatic pains after getting wet or cold. He went to work when he was 12 years old. Such are the main facts of the case.

There is no doubt or difficulty as to the nature of this eruption. It is a case of eczema—tolerably acute upon the face, but more chronic upon the hands. There is no other eruption presenting the characters above described which could be readily confounded with it. But the history of the case shews that its successful treatment is by no means easy. It certainly was not long before he got rid of it in the first instance, but it has now recurred, and has persisted for some months in spite of treatment at the hands of others.

It is to the principles which should guide us in the treatment of these cases that I wish to direct your attention. Eczema is not a substantive disease. It merely represents an inflammation of the skin (dermatitis) which is sometimes acute and sometimes chronic, and which is the result of damage inflicted in various ways, sometimes simple and obvious, at other times complex and obscure.

Considerable controversy has arisen from time to time as to whether eczema is a local or a general disease; or, in other words, whether it is due exclusively to local conditions or to constitutional disorder. I think that either generalisation will lead us into error. It is perfectly true that strong irritation even of healthy skin may induce eczema. Habitual contact with certain dyed fabrics, the frequent application of irritant fluids such as turpentine to remove the stains of French polish, and

constant attrition of opposed surfaces of skin in the presence of moisture furnish examples of this mode of origin. When the cause has been once detected, cure quickly follows its removal.

But far more frequently, whether external irritation be present or not, we are compelled to take cognisance of other factors which fall into two groups. In the one we have to deal with weakened nutrition, as a result of which the vitality of the structural elements of the skin is reduced to a lower standard and thus becomes more readily damaged by slighter causes than under normal conditions. This special sensitiveness to injury on the part of the skin may be inherited, and I suppose this is what is meant by such a term as "dartrous diathesis" by those who employ it at all. Struma is a good example of an inherited nutritional weakness favourable to the occurrence of skin inflammation. But of course the condition to which I now refer is much more frequently acquired, and forms part and parcel of general weakness from any cause. In such cases little or nothing can be done by treatment which does not include the correction of this fault.

The factors embraced in the second group are also the outcome of weak and perverted nutrition, as a result of which, substances are excreted by the skin which directly or indirectly give rise to irritation. I think that gout, rheumatism, diabetes, and certain forms of dyspepsia—all of them diseases in which eczema is common—yield factors of this kind. As the kidneys may be irritated and damaged by habitual excretion of the bye products of abnormal nutrition, so may the cutaneous excretory structures become irritated under similar conditions. Thus, diabetic eczema has probably close relation with the excretion of sugar by the skin; gouty eczema with uric acid; infantile eczema with acid products of dyspepsia, and so on. No doubt feeble vitality of the epidermic structures is often associated with these conditions; and with equal truth, local sources of irritation have usually much to do with the determination of the seat of mischief.

From the symptoms of the case before us it is highly probable that the eczematous trouble primarily depends upon what may

be called an "acid dyscrasia;" by which I mean the accumulation within the system of acids, such as uric, oxalic, and lactic acids in different combinations. Now the final products of complete oxidation of organic matter in the body are, as you know, urea, carbonic acid, and water; but many substances of an acid nature are formed which represent intermediate stages in the course of oxidation. If nutrition is slow and imperfect these intermediate products must clearly to a greater or less extent escape complete oxidation, and will be apt to give rise to rheumatic or gouty troubles. The rheumatic tendencies of our patient probably find their explanation in some such constitutional imperfection as this. Moreover we learn that he has always been liable to "bilious attacks" which are especially common in rheumatic and gouty habits. He never had eczema until he went to work, and exchanged the relatively active outdoor life of a schoolboy for the long hours of confinement at close work, thus still further interfering with oxidation processes by want of fresh air and exercise. The relative acidity of the system is probably increased by the absorption of acid fermentative products arising from slow digestion.

From these considerations you will see how important is the share which is taken by the general nutritive condition in the causation of eczema, and how necessary it is to analyse each case on its own merits and to adapt your treatment accordingly. In the present case the diet demands our first consideration. Though nourishing, it should be moderate in quantity, and consist of the simplest ingredients—milk, eggs, a moderate amount of fresh meat and vegetables once daily, avoiding sugar, and alcohol in every form. Farinaceous food should only be taken in moderation. The food should be well masticated and eaten slowly. For drink, cocoa or weak tea with a free allowance of water. I attach especial importance to the water as one of the best means of facilitating nutritive exchange and promoting efficient excretion. At the same time, as much exercise in the open air should be taken as is compatible with the avoidance of fatigue. By these means acid formation will be reduced, and oxidation of such products promoted.

As an eliminant of acid products from the system, nothing will answer better than salicylate of soda, given in ten-grain doses thrice daily after meals. This drug has the further advantage of checking putrefactive and fermentative processes in the alimentary canal.

It is worthy of note that the eruption is confined to the exposed parts of the body—viz, face and hands; and, moreover, we hear that he has been accustomed to wash these parts twice daily with soap and water. It is very likely that the limitation of the eruption to the face, neck, and hands depends very largely upon these facts. He should therefore be instructed to abstain from soap altogether, and merely to bathe the parts two or three times a week with simple milk and water, or a weak solution of borax in soft water. It is also desirable that he should habitually wear gloves, from which the finger-tips may be removed.

In selecting a local application, the chief objects in view are to soften and protect the skin and to keep the surface antiseptic. The class of preparations which most nearly fulfil these indications are mild mercurial ointments—say five grains of white precipitate to an ounce of vaseline, or a mixture of lanolin and vaselin. A mixture of equal parts of zinc oxide, ammoniated mercury, and sub-acetate of lead ointments—still further diluted with vaseline if necessary—is often useful. I have often used ichthyol ointment of two and a half per cent. to five per cent. strength with conspicuous advantage, when it can be borne without irritation; and I propose to employ it in this case, selecting the weaker strength to begin with. The hands would bear a stronger ointment than the face, because the skin is thicker and the inflammation far less acute there.

I shall not trouble you with any allusion to the large number of alternative “local applications” which have from time to time been recommended, partly because you will find them in your text-books, and partly because I believe that in the large majority of cases of eczema—well illustrated by that now before us—with wise general treatment, the indications for local treatment become relatively simple.

Postscript.—At the next visit of this patient (a fortnight later) there was very marked improvement in every respect. All acute inflammation of the face had disappeared, while the hands were nearly well.

ON THE USE OF ANTISEPTICS IN THE TREATMENT OF TYPHOID FEVER.*

BY E. N. NASON, B.A., M.B. CAMB.

Mr. President and Gentlemen,

In the short paper which I have the pleasure of reading to you this evening there is, I am afraid, nothing very new and nothing very original. I hope, however, that it will not be considered any waste of time if I bring before you a few facts concerning the *administration* in typhoid fever of certain so-called antiseptics—I do not say the *treatment* of typhoid fever by these antiseptic substances, since I do not wish you to imagine that, however much importance I may attach to their employment, I for one moment think that they can take the place of general treatment, or are to be regarded in the light of *specifics*. What I hope to do is to convince the meeting that there are certain very definite and constant advantages to be gained by their employment, and to induce those who have not already done so to give one or other of the better tried and more reliable of these antiseptics a fair trial in the treatment of typhoid fever. I do not think that anyone who has given this method a fair trial in a sufficient number of cases to be able to form an opinion, would afterwards prefer to fold his hands and trust entirely to the so-called expectant method.

My excuse for venturing to bring this subject before this meeting is two-fold.

1. That I have lately had the opportunity of watching side

* Read before the Birmingham and Midland Counties Branch of the British Medical Association on January 11th, 1894.

by side, in a somewhat widespread epidemic, the two forms of treatment, and have been much impressed by the contrast.

2. That among those who have never given the antiseptic method a fair trial there still seems to be a tendency to deny it any value whatever, and to heap ridicule upon those who dare to advocate it.

The Lancet, not very long ago, in a leading article, spoke in a rather scoffing tone of the antiseptic method, and summed up by saying, "The best authorities, in this country at least, now treat typhoid fever with the minimum of interference."

That there is much excuse for this scoffing tone I readily admit, although I deprecate it. The excuse is to be found in the altogether absurd claims made, and wild panegyrics written, by some of the advocates of the method. These extravagant claims are only equalled by the almost total want of solid evidence brought forward to sustain them, and only serve to prejudice sober-minded physicians against any form of antiseptic treatment at all.

One such wild enthusiast, in an essay lately published, advocating the use of salol, begins as follows:—"I desire to bring under the notice of my medical brethren a means of treatment in Typhoid, whereby the specific typhoid poison is rapidly and permanently destroyed in the patient; the course of the disease is arrested on the fifth day of treatment, when all the symptoms, excepting debility, subside and cease; and provided the treatment be applied at the proper stage, resolution of the inflamed glands in the intestinal tract takes place without ulceration." He goes on to excuse a somewhat hasty publication of his paper on the ground that "every day's delay involves the loss of life"!

And this statement he makes on the strength of twelve cases (in two of which the diagnosis was to say the least doubtful) two of which died, and in which the average febrile period of the cases which recovered was twenty-two days from the commencement and twelve days from the first exhibition of the drug. Such extravagant statements with no proof to support them deserve nothing but condemnation, and their authors must not

complain if they are received with ridicule as well as incredulity.

I hope however to be able to shew that not only is there a *primâ facie* reason why some form of antiseptic treatment should be employed in typhoid fever, but that in actual practice it is beneficial in a large proportion of cases.

In Typhoid the characteristic if not the initial lesion is an inflammatory condition involving the adenoid tissues of certain portions of the small intestine (Peyer's patches and solitary glands) and accompanied or possibly caused by the presence of certain specific organisms. In the early stages of the disease, when the general symptoms are probably no more than headache, malaise, and slight fever, these organisms are to be found in the adenoid tissues of the small intestines and in the intestinal fluids. It is in all probability the poisonous products of the growth and multiplication of these and other organisms, which when absorbed into the general circulation cause the various constitutional disturbances associated with the disease, and which also by their direct action upon the adenoid tissues themselves, in immediate contact with which they are brought, occasion the inflammatory lesions which result in ulceration, sloughing, hæmorrhage, or perforation.

The organisms found in the intestine in typhoid fever are not confined to the specific bacilli described by Klebs, Eberth, and others, but there are, in addition, numerous putrefactive organisms, which probably possess varied and distinct properties. Besides the two forms of rod-shaped bacilli supposed to be specially connected with typhoid fever—only the shorter of which, however, is found elsewhere than in the intestine, mesenteric glands, and spleen—there are several varieties of putrefactive bacteria and micrococci. To some of these latter are due both the offensive character of the stools and the evolution of putrefactive gases, and probably some at least of the constitutional disturbances, the result of intestinal irritation and absorption of ptomains.

Micrococci have been found in abundance in typhoid, not only in Peyer's patches and the solitary glands, but also in the

mesenteric glands and spleen (Klein). Even in health, bacteria can make their way from the intestine into the tissues of the intestinal wall (Bizzozero). If ulceration takes place, there must be a greatly increased risk of this and of general blood infection in addition, with its many serious consequences.

If, then, by the ingestion of any drug we can reach these multiplying colonies of micro-organisms, and, whether they be specific or merely putrefactive, either destroy them or so influence their environment as to stop or retard their growth without deleteriously affecting the patient, we must without any doubt do good, independent of any possibly beneficial action of the drug when absorbed. In other words, its "local," independent of its "general" action, must be beneficial. *Any antiseptic treatment which aims at this is, then, both rational and scientific.*

But it may be objected that if micro-organisms have already obtained entrance into the general circulation, you cannot influence them except by general antiseptics, whose beneficial action, if it exists at all, is not so capable of proof. Whether it is possible by so-called general antiseptics to affect the development of micro-organisms in the blood I do not know, though I would not deny the possibility. But we do not, in this particular case, quite definitely know whether in the earlier stages of typhoid these organisms themselves are present in the blood, and capable of multiplication there, or whether it is their products alone which are causing the constitutional symptoms. But, at all events, if they are present, the adenoid tissues of the small intestine and the intestinal fluids form foci of infection which are to a great extent responsible for the supply, and which are certainly capable of being influenced by various antiseptic substances.

It is certainly worthy of remark that most of the remedies recommended in typhoid by the greatest physicians of the past were antiseptic substances, and probably owed much of their beneficial action to their antiseptic properties. Such substances as calomel and other mercurial salts, charcoal, chlorine-water,

turpentine, etc., were recommended and used extensively by such men as Murchison, Niemeyer, Sir Thomas Watson, and Sir William Jenner long before the "antiseptic idea" had birth. Of late years many physicians of repute have made use of some antiseptic substance with the express purpose of controlling micro-organismal action in the intestine in typhoid.

Dr. Wilks (of Ashford), as long ago as 1870, published in the *B.M.J.* a paper on the "Antiseptic Treatment of Typhoid." He speaks in very high terms of sulphurous acid given in from 3 m. to 20 m. doses every four hours. This he had employed in 171 cases without a death.

Dr. Burney Yeo, whose method I have followed in my own practice, published a short paper in the *Lancet* for April 11th, 1891, in which he claimed certain advantages which my own experience fully bears out.

Dr. Mitchel Clarke, in the *Practitioner*, speaks very highly of β naphthol, and also of hydro-naphthol. Others have obtained good results from tr. iodine, thymol, eucalyptol, guaiacol, etc.

The ideal antiseptic in typhoid fever, which has yet to be discovered, must fulfil the following conditions ;—

1. It must be innocuous to the patient.
2. It must be destructive of micro-organismal action without interfering with the normal digestive ferments.
3. It must reach the small intestine while still operative.
4. It must be capable of absorption from the intestine and not a completely insoluble substance.

Dr. Burney Yeo, in the paper before alluded to, recommends free chlorine combined with small doses of quinine, and prepared in the following way :—

Into a dry twelve-ounce bottle place about 30 grains of Chlorate of Potassium, and upon this pour 40 drops of strong Hydrochloric acid. A yellowish green gas is given off which should be allowed to accumulate in the bottle, then add water, an ounce or so at a time, shaking well as the water is added. The gas dissolves in the water forming a yellowish green solution and smelling strongly of chlorine.

This solution contains free chlorine, per-oxide of chlorine, protoxide of chlorine (euchlorine), and some undecomposed chlorate of potassium. To this is added 24 grains of Quinine and a little syrup of orange. The mixture should be kept in a cool dark place as it decomposes under the influence of a strong light. An ounce of this should be given every three or four hours for an adult, for children a proportionately small dose.

It is this preparation that I have employed almost exclusively of late in treating typhoid, and I have every reason to endorse Dr. Burney Yeo's favourable opinion of it.

In looking over the temperature charts, etc., of 40 cases of typhoid in which the temperature was taken regularly by one of our trained district nurses, and which comprise one-half of the total number nursed by our district nurses during the epidemic, I find that the average duration of the febrile period from the time the temperature was first taken was 17 days in those treated by the chlorinated quinine, as opposed to 24 in those not so treated. In most cases the treatment was not begun until the temperature had been taken some six or seven days, and in no case was it begun until the diagnosis of typhoid was reasonably certain.

In no one of the 15 cases treated by the chlorinated quinine was there any complication, and though in two there was a relapse, in all coalescence was rapid and complete. In the 64 cases not so treated there were five deaths and eight relapses, hæmorrhage occurred in several, and many of the cases were very tedious. The mortality was 7·5 per cent.

In 6 out of the 15 cases treated by chlorinated quinine, there was a sudden drop of temperature within twenty-four hours of the commencement of the treatment, and a steady decline of evening temperature, until the normal was reached within a very few days. Convalescence seemed to begin with the initial fall of temperature. This seems too large a proportion to be accounted for by coincidence. In every case of the 15 so treated there was a perceptible, if temporary, lowering of the temperature at once. The tongue, especially if brown and dry,

became moist and decidedly cleaner. The mouth became less foul, and the motions lost their foetid odour, and the patient's general condition and feeling of well-being seemed improved. I believe this much may be confidently relied upon in all cases to follow this particular treatment.

And here I may at once say that I do not wish to attach too much importance to the fact that in all the cases in which I have employed this treatment recovery has taken place, as the number of cases (15) is far too small to be of much value as an index of comparative mortalities. But I do attach considerable importance to the fact that certain definite improvements took place in *every* case, apparently as a direct result of this treatment.

It would be tedious, if not useless, to give a complete history of each case, but I should like to give a short history of one which is more or less typical of the series.

Edith P., age 23, was first seen on October 3rd, and had then been ailing some few days. Her temperature was 104° , and her tongue covered with brownish fur. She felt ill, and was a little wandering at night. There was slight abdominal tenderness. She was put on fever diet, and watched. On October 9th, by which date diarrhoea of a typical nature had set in and typical typhoid spots had begun to appear, I was able to notify the case as one of typhoid. During the interval the temperature had varied between 103° and 104.5° , and the patient had been getting distinctly worse; the tongue had become brown and dry, and the pulse had risen to 120. On October 10th she was put upon the chlorine mixture. Next day the temperature fell two degrees, and continued to subside gradually until the normal was reached on October 18th. The tongue on October 11th was noticed to be moist, and the next day the motions lost their foetor; the patient, too, expressed herself as *feeling* better. The facial aspect was very markedly improved, and the condition of hebetude which had previously existed was gone. The patient made an uninterrupted and rapid recovery.

What was most striking about this case was that, co-incident with the administration of the chlorinated quinine, the *type* of the disease seemed to alter, and what had previously given every indication of being a rather severe form of typhoid, suddenly put on a milder aspect. This, one might of course say, was merely a co-incidence, but that in six out of fifteen cases similarly treated the same kind of rapid improvement took place.

In the remaining nine, although improvement was at once to be seen it was not nearly so marked, and in one case, although the general condition improved somewhat, the temperature remained practically unaltered after the first day or so, and continued above the normal for nearly four weeks. It is such a case as this latter which would forbid one claiming too much for the method, and compels one to recognise that typhoid fever, even when treated antiseptically, is still a "serious disease." However, in this particular case the treatment was not begun until what was probably the beginning of the third week if not later, and I think it seems certain that the best results may be expected if the treatment is begun before the end of the second week.

I do not wish to contend that this particular mixture is necessarily the best form of antiseptic to be used; other antiseptics may possibly be much more efficacious as approaching more nearly to the ideal. But meanwhile I can safely recommend it for use in typhoid, since there is all to gain and nothing to lose by its employment.

In conclusion, I may give in brief the advantages I claim for this special treatment, certain of which are constant, and certain of which may be expected to follow this treatment more frequently than the expectant method.

Constant.—1. Reduction of temperature to greater or less extent.

2. Improvement in condition of tongue and mouth.
3. Reduction of fœtor of stools.
4. Improvement in general appearance and condition, with a greater sense of well-being, and less hebetude.

5. Prevention of excessive fermentative or putrefactive changes in intestine with consequent tympanites.

Occurring with greater frequency than ordinarily :—

1. Abortive attacks.
2. Freedom from complications.
3. Shortened febrile period.
4. More rapid convalescence.
5. Low mortality.

I think, sir, that these points are more than sufficient to warrant a wider trial of this method in the treatment of typhoid fever.

ACUTE INVERSION OF THE UTERUS.*

BY JOHN MONTGOMERY, M.B. EDIN.

THE subject of my paper was prominently brought before my mind by a case which I met with some little time ago. Before speaking in detail of acute inversion of the uterus, let me briefly narrate the facts of that case.

Mrs. S., a delicate-looking woman aged 34, was taken in labour with her first child on August 10th, 1893. The first and second stages of labour, as far as I could gather from the midwife, had been long and lingering; the pains, for the most part, irregular and spasmodic in character. After forty-eight hours' labour the child was born. The uterus, as if wearied out with its long-continued exertions, refused to contract; and the midwife, after waiting a short time and finding that the afterbirth did not come away, thought to expedite matters by pulling on the umbilical cord with one hand, whilst with the other above the pubes she pushed downwards into the pelvis. The result of these combined efforts was rather startling. The patient suddenly complained of an acute bearing down pain, and the next moment

* A paper read before the Queen's College Medical Society on December 13th, 1893.

what appeared to be a huge afterbirth “flopped”—to use the nurse’s own expression—from the vulva into the bed. Then came the puzzling part of the performance. The midwife was unable to separate the supposed afterbirth from the woman. After several tugging and twisting efforts she gave it up as a bad job, and I was hurriedly summoned. On my arrival, about twenty minutes after the accident had happened, I found the patient in great pain and a good deal frightened, but not in a condition approaching collapse. In fact, she appeared to be suffering more from fright than shock, and her general condition gave me no indication whatever that such a grave lesion as inversion of the uterus had occurred. On external examination, I found what at first sight certainly looked like a large pear-shaped placenta, the small end passing into the vagina, and the free extremity having the umbilical cord attached to it. On looking closer, however, there was very little difficulty in coming to the conclusion that this pear-shaped mass was composed of something more than placenta—in short, that the uterus had been turned completely inside out. The placenta capped the summit of the inverted fundus, and was so firmly adherent that scarcely a drop of blood had escaped from any part of the uterine surface. There was some difficulty in finding the edge of the placenta, as its surface looked exactly like that of the uterine wall; but having done so, I hastily peeled it off, together with the membranes, and, without any trouble at all, reinverted the uterus after cleansing it with hot water. Very little bleeding took place while the placenta was being stripped off, and the actual process of restoring the uterus did not occupy more than half a minute. After contraction had been obtained I withdrew my hand, washed out the uterus with a hot antiseptic solution, and gave the patient some ergot and a stimulant. She made a rapid and uninterrupted recovery, and is now perfectly well.

Acute inversion of the uterus as a complication of the third stage of labour—and only in this connection do I intend to speak of it—is exceedingly rare. From statistics of Lying-in Hospitals

the proportion is given as 1 in about 200,000 cases. It would be interesting could we only find the proportion in private practice. One seldom sees the report of a case in the medical papers, yet cases must surely sometimes occur. It is only as a rule when the accident happens in the hands of a midwife and skilled aid is summoned that any description of it is forthcoming. There is a good reason for this silence on the part of many practitioners, viz, that inversion of the uterus is never or hardly ever met with in the practice of those who know how to manage the third stage of labour properly. You may think I am putting it rather forcibly when I make such a statement, but there can be no doubt that one of the great causes of the accident is gross negligence or ignorance, or a combination of the two in the conduct of the third stage of labour. Yet a correct management of the separation and expulsion of the placenta is one of the most important duties of the attendant. I sometimes wonder how many of us in practice appreciate this importance and wait the regulation half-hour to see if the placenta will be delivered by natural before resorting to artificial means. Is it not too often the case that when the child is born we imagine our task at an end, that what remains to be done is of minor consideration and can be hurried over without ill effect; or perhaps in a hurry to get off to a dance or a dinner party, or impatient and wearied out with a long all-night attendance, we forget the due appreciation which the third stage deserves. Thus accidents happen for which we are sorry afterwards. The practitioner who is unremitting in attention to his patient and knows how to manage the expulsion of the placenta is seldom troubled with cases of *post partum* hæmorrhage and retained placenta. The latter seems to trouble some practitioners very much, every second or third case they attend has got an adherent placenta. Now judging from the comparative rarity of true adherent placenta, one can gauge pretty accurately a practitioner's capability to manage a labour properly by the number of these cases he meets with.

In inversion of the uterus, the organ is turned more or less

completely inside out, its peritoneal surface becoming interior, and in the cavity thus formed you may find the Fallopian tubes, ovaries, and round ligaments. It may exist in three degrees, 1st, where the fundus is partially inverted and presents a cup-like depression, but does not descend through the external os; 2nd, where the inverted fundus passes through the os into the vagina; and 3rd, where the inversion is complete, the cervix being inverted to the vaginal attachment and the fundus prolapsed through the vulva. It is caused too often by injudicious and meddlesome interference on the part of the accoucheur, who cannot resist the temptation to have a pull at the cord as a nice easy way of delivering the placenta, or who pushes the fundus down during relaxation of the uterus in the attempt to express the placenta. In other cases it may arise spontaneously, for example, when the placental site is pulled inwards during expulsion of the child by the cord being either actually short or only apparently so from being coiled round the neck. Sometimes the cause is a straining effort on the part of the patient, as in coughing, micturition, or defæcation, immediately after delivery. In whatever way arising, it is absolutely essential to its production that the uterus be wholly or partially relaxed. At any rate, that part of the uterine wall which first bulges in, be it placental site or not, must be in a state of relaxation; it would be impossible, even if one tried, to invert a firmly contracted uterus. In those cases which are not turned completely inside out by roughly pulling on the funis, the mechanism is very simple. The part of the uterine wall which first protrudes inwards acts like a foreign body and excites the rest of the uterus, causing it to contract and thus expel the inverted part through the os. There cannot be any doubt but that a fundal insertion of the placenta, instead of one on the anterior or posterior wall, favours inversion if the uterus be at all relaxed in that situation, as the weight of the placenta or traction on the cord more readily drags the fundus inwards and starts the inversion. In the case I have related the placenta was inserted exactly on the fundus. The principal symptoms are said to be shock and

hæmorrhage. In the only case I have seen there was neither. One of course could imagine that shock, more or less severe, would be present, as there must be great disturbance in the intra-abdominal blood pressure and pain from strangulation of the uterus and dragging on the broad ligaments; but it seems to me that when shock is a prominent symptom it is chiefly due to loss of blood. My reason for saying so is that in the case before referred to where there was no hæmorrhage there was little or no shock. There can only be hæmorrhage when the placenta is partially or completely separated, but should it occur it is continuous as the inverted uterus cannot contract in the natural way to check it. The other symptoms are bearing down efforts, the patient trying to expel something from the pelvis, and straining attempts at micturition and defæcation.

The diagnosis is not difficult. If the placenta be still adherent it is impossible to mistake it for anything else. If it has separated or been removed, you might possibly for a moment think you had to deal with a fibroid tumour or uterine polypus, but the absence of the uterus above the symphysis pubis would at once set you right. When the inversion is produced gradually prominent symptoms will be absent: therefore when unusual and unexplained pain or slight shock come on shortly after delivery, it is well to make sure by a bimanual examination that the uterus is not inverted. No doubt many of the cases of chronic inversion which come into the hands of the gynæcologist are cases which have been overlooked at the time of delivery.

The prognosis is not very encouraging. According to Crosse, quoted by Galabin, death results within a few hours in 28 per cent. of the cases, and sooner or later in about 42 per cent. In the majority of cases death takes place from hæmorrhage and shock shortly after the accident. If the inversion is left untreated, the patient may die from repeated hæmorrhages during menstruation, or from septicæmia brought on by strangulation and sloughing of the inverted fundus. In some few cases toleration may be established, and the patient goes through life fairly comfortably with an inverted uterus.

Treatment.—First of all, treat the urgent symptoms of shock and hæmorrhage, if present, by giving brandy by the mouth or rectum, or ether subcutaneously. If there be great loss of blood, transfusion may be necessary.

Concerning the operative treatment of the condition itself, there is some difference of opinion. I will quote what Lusk says about it. "If the placenta is detached to any great extent, its separation should be completed before replacement; if adherent, no time should be lost, but placenta and fundus should be pushed back together." I cannot understand why such instructions are given. When the placenta is partially separated, there must have been a certain amount of bleeding. The patient will be suffering from a degree of shock depending on the length of time the uterus has been inverted; and yet we are told to wait and complete the separation of the placenta before restoring the uterus. Now examine the other condition where the placenta is still adherent throughout. In this case there can be little or no hæmorrhage, and the treatment we are advised to carry out is not to waste time in stripping off the placenta, but return it with the uterus as quickly as possible. When we are students we think it just as well, for reasons which I need scarcely mention, to know and pretend to follow, quite independently of our own convictions, what the teachers and text-books have to say on certain subjects; but when once out of leading-strings, and the dread of the examination-room no longer disturbs our dreams, it is oftentimes best—at all events for our patients—not to follow too closely those precepts which we formerly thought infallible. Use your own common sense, and in many cases it will stand you in better stead than all the teaching of the elders. If the placenta is partially detached or firmly adherent—no matter which, and no matter what the condition of the patient may be—peel it off along with the membranes (it will not take half a minute), and then return the uterus.

My reasons for this line of treatment are two in number: First, you can see—at any rate in those cases where the fundus is prolapsed through the vulva—exactly what you are doing,

and can remove completely every bit of placenta and membranes far more quickly and more easily than by the hand in the reinverted uterus. Secondly—and this is the more important reason of the two—you reduce very considerably the size of the prolapsed mass which has to be returned, and thereby render the task a much quicker and easier one. Some may say, “What about the bleeding while you are peeling off the placenta; the uterus cannot contract and check it, being turned inside out?” The answer is this: You have the whole bleeding surface bare before you; what could be more easy than to pour a kettle of hot (not boiling) water over it? I think that would effectually check any troublesome hæmorrhage, and the kettle is always at hand. Having disposed of the placenta, grasp the uterus with the fingers and thumb, allowing the fundus to rest in the palm of the hand, and push steadily but gently upwards in the axes of the pelvis, taking care to keep up counter pressure with the external hand above the pubes, so as to avoid unduly stretching the uterine attachments. When you have reduced the uterus as far as you can in this way, close the internal hand and push onwards with the fist, bearing well in mind and avoiding the sacral promontory.

In the latter part of the process of reduction the summit of the fundus may “hang fire” and give some difficulty, but by pressing at one or other side in the region of a Fallopian tube you will have the satisfaction of feeling it roll back into position. It has been suggested to anæsthetise the patient in those cases where there is spasmodic contraction of the cervix and the fundus cannot easily be returned. I think you will find that an anæsthetic very seldom will be necessary or available, but should there be much pain and restlessness to hamper you in your manipulations and the condition of the patient admits, by all means give it. After reduction has been completed keep the fist in the uterus until firm contraction is obtained, then wash out with some hot antiseptic lotion and give a dose of ergot. The patient must be kept rather longer in bed than after an ordinary labour in order that the uterus and its attachments may have time to consolidate in their normal positions.

THE NATURAL MINERAL WATERS OF

State

VICHY

Springs.

CELESTINS.—For Diseases of the Kidneys, Gravel, Gout,
Rheumatism, Diabetes, &c.

GRANDE-GRILLE.—For Diseases of the Liver, & Biliary
Organs, &c.

HÔPITAL.—For Stomach Complaints.

HAUTERIVE.—An excellent TABLE WATER.

*Samples and Phamphlet free to members of the Medical
Profession on application.*

SOLE AGENTS:—

INGRAM & ROYLE,

52, FARRINGDON STREET, LONDON, E.C.,

and

19, SOUTH JOHN ST., LIVERPOOL.

TELEPHONE No. 4138.

TO THE MEDICAL PROFESSION

WE ARE NOW PREPARED TO SUPPLY A FULL LINE OF
THE PHARMACEUTICAL PRODUCTS OF

MESSRS. JOHN WYETH & BROTHER

Manufacturing Pharmaceutical Chemists,

PHILADELPHIA, U. S. ; AND 30, SNOW HILL, LONDON, E.C.

CONSISTING OF

COMPRESSED PILLS OR POWDERS.

These are supplied to the Retail Chemists in parcels not less than one hundred each, and it is intended that prescriptions for these goods should be filled in the ordinary way of dispensing, and not with original parcels, which enable the patient to repeat without prescription, as they would obtain box of patent pills.

SOLUBLE COMPRESSED HYPODERMIC DISCS COMPRESSED OPHTHALMIC DISCS.

These would naturally be used under the guidance of the Physician or Surgeon.

WYETH'S BEEF JUICE.

WYETH'S DIALYSED IRON.

WYETH'S WINE OF TAR.

WYETH'S PEPTONIC PILLS

WYETH'S PEPSIN, PANCREATIN, &c

~~~~~  
*Having been appointed Distributing Agents for Birmingham and the Midlands for these preparations, we are prepared to supply Printed Matter and Catalogues on demand.*  
~~~~~

WHEN ORDERING THESE GOODS PLEASE SPECIFY "WYETH'S."

F. H. PROSSER & CO.,

COLONNADE BUILDINGS, 14, ETHEL STREET, NEW ST., BIRMINGHAM

AGENTS FOR DR. PISSIN'S

(State Councillor of Health, Berlin.)

PURE CALF LYMPH.

FRESH SUPPLIES DAILY.

1/- per tube ; 6 tubes, 5 6 ; 12 tubes, 10/-

FRESH HEALTHY LEECHES—ALWAYS IN STOCK.

MEDICAL PHOTOGRAPHY.

BY HALL EDWARDS, L.R.C.P., ETC.

PRESIDENT OF THE MIDLAND CAMERA CLUB.

To the uninitiated, the connection between medicine and photography must seem a very remote one, and some apology may appear necessary for introducing so technical a subject. As, however, photography is capable of aiding to an almost immeasurable extent the study of the sciences and arts of medicine and surgery, and as a large and growing number of medical practitioners and students are photographers, an article upon the value of photography in advancing the progress of medicine may not prove without interest to the medical reader.

A photographer who is worthy of the name loves his art-science, not so much because it is capable of producing beautiful pictures, as because of its extreme usefulness in helping the progress of other sciences. There is hardly a branch of science which cannot be aided by it to some extent, and medicine is no exception to the rule. Its usefulness is more and more appreciated by its votaries every day; and this appreciation must continue to grow as long as the scope of its application continues to enlarge. It has already done much, and is likely to do more, in increasing our knowledge of medical science, and in helping investigators in their researches.

Every physician and surgeon should have some knowledge of photography, for it is impossible to overestimate its value. So far, however, they have not given sufficient attention to it, nor do they fully appreciate the many advantages likely to arise from a more extended study of the application of the art to their special work.

It places in the hands of the medical man increased power of truthfully transcribing his thoughts with more ease and greater accuracy than any other method of illustration. It enables him to see cases which could not in any other way be

brought under his personal observation. By its extended use the country practitioner might be placed upon a more even footing with his town colleague, who has the great advantage of an appointment at a large general hospital. And the investigator of any special disease would be enabled to draw comparisons from a large number of cases which could never come under his individual notice.

The time necessary for acquiring a knowledge of photography sufficient to serve the purpose of the general practitioner in medicine has been considerably lessened, owing to the enormous strides the art has made during the last few years. With ready-made dry plates, ready-prepared developers, and improved apparatus generally, anyone with an ordinary amount of common sense and manipulative skill can produce results which must prove useful even if they are not artistic.

Medical students should be urged by their teachers to take up the study of photography. It would form a pleasant species of relaxation from their more absorbing professional studies. They should commence with landscape work, and gradually work up until their manipulative skill is sufficient to enable them to apply the art to their special branch of science. I would even go so far as to recommend a series of lectures upon the subject.

Within the last few years marked advances have been made in the illustrations of medical literature. These have been brought about by the rapid development of our knowledge of photography and the great improvements made in photo-mechanical printing processes. Many of the illustrations which were contained in our older text books bore little or no resemblance to the original objects they were meant to depict. This was due, in a great measure, to the fact that the artists were not medical men, and therefore could not fully appreciate the points which were of the greatest importance. Their efforts to produce artistic pictures frequently resulted in the drawings being rendered next to useless for the purpose for which they were originally intended. Photographs, even when badly

executed, render the work of the artist comparatively light ; and if they are taken by medical men who understand the chief points to be illustrated, the resulting drawings are much increased in value.

I should like to see our medical societies take more interest in photography, as its extended and more universal practice would render their work easier, and the papers read at them more interesting. A public lecturer who does not illustrate his remarks with optical lantern views has, at the present time, considerable difficulty in obtaining an audience ; and I cannot but feel that the numbers attending the meetings of our societies would be considerably increased if some of the dry papers read before them were enlivened by throwing upon the screen photographs of interesting cases, specially taken with the idea of illustrating the points under discussion. It is of course impossible to thus illustrate all subjects ; but the scope of photography has been so extended that pictures of obscure and difficult cases can be taken under conditions which, even but a few years ago, would have been impossible. The application of photography to microscopical work renders it possible to illustrate pathological conditions in such a way that a large meeting can all view, at the same time, an accurate picture of a section of a normal or diseased tissue. Diseased organs, tumours, and a large variety of *post mortem* treasures can also be truthfully demonstrated without the bringing of not too sweet and not too insanitary specimens into the lecture-room.

All medical photographs can be reproduced in the form of lantern slides. These are much less bulky and far more truthful than diagrams, and, with an optical lantern at hand, are always ready for immediate use. Moreover, they can be reproduced in large numbers at a very small cost. They require very little room for storage, and should one get broken, it can easily be replaced.

The value of illustrations in the dissemination of medical knowledge cannot be overestimated. Some of our older surgeons, who were alive to the immense importance of illus-

trating medical literature, spent large fortunes in making collections of drawings and paintings of abnormal conditions. These, owing to the enormous expense which was required for reproduction, were deposited in our museums, where they can only be viewed by a comparatively small number of those men interested ; and where the knowledge they are designed to convey is so hidden away that they are comparatively useless. Now however, thanks to photography, truthful pictures can be produced, and copies distributed at so little cost, that it should lie within the power of every medical man to have at hand collections, the extrinsic value of which cannot be measured. The advances made by the numerous photo-mechanical processes within the last few years has marked a new era in the illustration of medical works. In olden times it was necessary, when executing a wood engraving, to have the drawing reversed upon the block before being engraved ; now, however, drawings are made upon paper and are photographed upon the block itself, the engraver working through the photograph. This method of procedure is only suitable for making copies of very accurately drawn objects. In the reproduction of photographs of cases other methods are better and cheaper. Photogravure, Meisenbach, zincotype, collotype, and many other processes are more applicable.

To give a description of each of those processes would occupy a large amount of space, and would hardly come within the province of this article.

For the proper illustration of clinical and pathological appearances in medical literature it is frequently necessary that coloured plates should be used. For producing these we used to resort to, and solely depend upon, lithography, having a separate stone and printing for each colour. Photography has again come to our assistance, and has helped us over this difficulty. We are now able to photograph directly upon a zinc block and print with any number of colours. The re-drawing of the picture for each separate colour is unnecessary, and thus one source of weakness is gone ; for it is well known by artists

that copies become weaker and weaker, and depart more and more from the original at each reproduction. The more mechanical the means by which such illustrations are produced, the nearer they approach to truth.

Medical science has undoubtedly gained much from the work of its few votaries who have been skilled artists. Photography has, to a great extent, rendered the existence of these gentlemen next to unnecessary, for it now lies within the power of almost every medical man to advance our knowledge by its aid. It places a power in the hands of those whose aim is progress which can hardly be surpassed. It enables the country practitioner to be brought face to face with rare and unusual cases in such a way that he is almost as deeply impressed by them as he would be if he saw the actual cases themselves. It enables comparisons of different cases to be made by those who are interested in following the intricacies of any special disease. They can, in a very short space of time and with very little trouble, see cases which might not (in the flesh) come under the notice of any ten men during their lifetime. Carefully-taken notes, illustrated by photography, should be published by every large hospital, so that everyone may have the opportunity of drawing conclusions from such rare cases as ordinarily come only under the personal observation of a favoured few.

For teaching purposes such illustrated collections of notes are almost invaluable. When lecturing upon some subject which lends itself to photographic art, what an immense advantage it is to be in a position to place before your listeners a series of photographs of similar cases: comparisons and observations can be made which might never come under the notice of any one individual unless a permanent record had been in existence. During a course of lectures on medicine it is a common practice to bring before the class cases of the disease being discussed. Now it not infrequently happens that at the precise time the cases required for illustrating the lecture are not forthcoming. The gap can easily be temporarily filled up by the exhibition of photographs. Let us take an example:—A pro-

fessor is lecturing upon Facial Paralysis when there is no such case in the hospital connected with the medical school. If he has a series of photographs of such a case by him he is enabled not only to shew pictures of actual cases themselves, but is in a position to exhibit some of their diagnostic symptoms. He can produce pictures of a patient with his tongue out, with his eyes closed, whistling, and going through the various other manœuvres which are usually resorted to to demonstrate the special set or sets of muscles paralysed.

I might enumerate many other instances in which, in like manner, it is not only possible to exhibit the cases themselves, but also to demonstrate some of their symptoms. A large majority of medical cases, however, do not lend themselves directly to the camera; but even in these photography can lend some aid under certain circumstances. Pulse tracings, urinary deposits, sections of diseased organs, etc., can be photographed, and their images thrown on the screen. On the other hand, there is hardly a single surgical condition which cannot be illustrated to some extent by our art-science. Photographs of fractures, as they are brought into the out-patient department, are exceedingly useful for purposes of diagnosis.

Every surgical out-patient department should have in its immediate vicinity a properly appointed, well-lighted, and well-warmed studio; in which all interesting cases can be photographed without waste of time or inconvenience to the patient. The results which would accrue from the following out of this suggestion would soon redound to the benefit of the patients themselves, and succeeding generations would reap the harvest of their predecessors' temporary discomfort. The hospital studio should be as well-lighted as possible, as celerity in taking a medical case is a desideratum. It should, as far as possible, be within easy access of both the out-patient department and the operation theatre, and should be under the charge of a competent and well-trained medical photographer.

A well-lighted room is a *sine qua non*, as it not infrequently happens that your patient has to be stripped, and waste of time

not only renders him likely to take cold, but makes him nervous and irritable. A lens of the rapid rectilinear type should be used in conjunction with an instantaneous shutter. The lens should be much larger than is necessary to cover the plate used, so that a stop with a moderate aperture, admitting plenty of light, can be used. Should a studio not be available, the operation theatre, which is generally well-lighted, may be used for the purpose, a background being formed with a blanket, and reflectors, with sheets hung over screens or clothes horses. Supposing that no well-lighted suitable room can be found, the taking of good medical photographs need not be despaired of; for in this emergency the flashlight comes to our aid, and some of the best photographs I have seen have been taken by this method. The details for the arrangement of this light can be found in any modern book on photography. The introduction of the flashlight has rendered it possible to take photographs under conditions, and circumstances, which would have previously debarred the use of the camera. The absence of daylight is now no impediment in the way of producing good pictures. With the aid of the flashlight photographs of cases may be taken at medical meetings within a few moments of their having been exhibited; and illustrations thus produced would add considerably to the value of the published proceedings of the society, and would form a permanent and reliable record of the work done. It is impossible in a short article like the present one to touch upon the immense variety of ways in which photography is useful in lending aid to the practitioner of medicine. My object, however, in this brief sketch, is to point out its extreme usefulness, and to stimulate those who have higher aims in life than those of mere tradesmen, to lay before others their individual observations. New knowledge means increased power, and in the war which medical science is waging against disease the new knowledge which photography is capable of bringing to us must be of great benefit in helping us to ameliorate the pain and suffering of mankind.

REPORTS OF CASES.

AN UNUSUAL CAUSE OF RENAL HÆMORRHAGE GENERAL CYSTIC DEGENERATION OF THE KIDNEYS.

BY WILLIAM COLLIER, M.D., F.R.C.P.
PHYSICIAN TO THE RADCLIFFE INFIRMARY, OXFORD.

H. D., aged 36, labourer, shortly after lifting some pails of water on June 24th, 1893, was seized with pain in the right lumbar region and began to pass water of a dark porter colour. On examination there was very decided fulness and marked tenderness over the region of the right kidney, and the urine on examination was found to contain a large quantity of blood. During the next week the symptoms remained unchanged, except that the amount of blood passed was distinctly intermittent in quantity. The microscope shewed blood cells, large round and tailed cells, and ordinary squamous epithelium in great abundance. The symptoms seemed to point to malignant disease of the right kidney.

On July 6th, a fortnight from onset of the hæmorrhage, total suppression supervened, with symptoms of uræmia, vomiting, muscular twitchings, and great drowsiness. Forty-eight hours later the patient died. He had been under medical treatment four months previously for chronic rheumatism. No disease of the kidneys at that time suspected.

Autopsy.—Both kidneys much enlarged, and their substance almost entirely converted into closely aggregated cysts. The right kidney was about the size of a cocoa nut. A large hæmorrhage had taken place between the capsule and the kidney, dissecting off the capsule, and had burst into one of the cysts, which, in turn, had ruptured into the pelvis. The ureters and bladder were perfectly healthy.

Prepared in Buckinghamshire.

LIQUOR CARNIS (CAFFYN). (MEAT JUICE.)

.....

The LANCET reports again :

"This valuable food has on a previous occasion found a place in our records of analytical work. It has since been considerably improved in many essential respects, not the least of which are flavour, keeping properties, on exposure to air, and mode of manufacture, in which, it should be added, provision is made to secure the product against all risk of infection."—THE LANCET.

SUPPLIED IN 2/- BOTTLES RETAIL.

'Virol.'

"We have made an extensive trial of Virol, especially amongst invalid children, and find it to be an excellent and popular form of food for them. It has an agreeable taste, and does not destroy the palate for the more ordinary aliment. Virol contains, in proper proportion, all the constituents of an ordinary mixed diet; it is easy of administration, digestion, and absorption, and so cannot fail to be of the highest utility in a large class of wasting disorders."—BRAITHWAITE, 1893.

THE LANCET.

LONDON.] SATURDAY. [AUG. 29,

"CAFFYN'S MALTO-CARNIS represents a judicious combination of LIQUOR CARNIS (meat juice) made into a delicious and tasty form by combining it with Malt and Cocoa."

CAFFYN'S MALTO CARNIS

"contains 75 per cent. of Liquor Carnis with Malt and Cocoa."

For Analysis see "The Lancet," August 29th, 1891.

London Offices :

SMITHFIELD WORKS,
28a, FARRINCORN ST.

Chief Offices & Works :

The Liquor Carnis Co., Ltd.,
ASTON CLINTON,
BUCKS.
WILLIAM SHEPPERSON, Managing Director.

NESTLÉ'S FOOD

FOR

INFANTS & INVALIDS.

"Invaluable in Cholera Infantum."

"Beneficial as a Diet in severe cases of Typhoid."

"Renders valuable assistance in Wasting Fever."

PAMPHLET containing Extracts from Standard Medical Works in which the above

Testimony is given, sent free with Sample Tin on application to

H. NESTLÉ,
9, Snow Hill,
LONDON,
E.C.

HIGHEST HONOURS at the CHICAGO EXHIBITION,
THE MEDAL and DIPLOMA have been
awarded both to NESTLÉ'S FOOD and NESTLÉ'S MILK.
viz.,



ATTENTION

is also drawn to

NESTLÉ'S
SWISS (CONDENSED) **MILK.**

Which through its RICHNESS in CREAM and UNIFORMITY of QUALITY has obtained the LARGEST SALE IN GREAT BRITAIN.

It can be used for all purposes of FRESH MILK.

Samples to members of the Medical Profession sent free on application to

H. NESTLÉ, 9, SNOW HILL, LONDON, E.C.

CEREBELLAR HÆMORRHAGE.

WITH NOTES OF CASE BY J. R. RATCLIFFE, M.B. EDIN.

The following case is of interest, as it is one of comparative rarity and a typical one of its kind.

Case. G. E. R., a boy aged 10 years, was brought to the General Hospital on April 21st, 1892, at 1.30 p.m., with the following history:—At 11.15 that morning he went into a yard to play. Twenty minutes later he *walked* home, saying that he had fallen from a wall a few feet high on to his head. He complained of great pain at the back of his head, and shortly afterwards he vomited.

On admission he was pale and collapsed, but was able to give his name. He complained of great pain at the left side of his head, on touching which he winced; but there were no marks or signs of external injury whatever. There was no paralysis of legs or arms, but the movements were feeble. The pupils were somewhat contracted on admission, but an hour before death they became dilated. At 2 p.m. the respiration commenced to fail. The respirations became slow—six to the minute—and shallow, and he became cyanosed. The pulse continued very fair. Breathing became worse and finally ceased, the heart failing after the respiration. He died at 4 p.m., about four hours and a half after the fall. He did not vomit in hospital.

Post mortem.—Body well nourished, lips cyanotic. No external injury to head whatever, no hæmatoma of scalp, or any abrasion.

Brain. On removing the dura, there is a slight congestion of the vessels of the pia with some slight hæmorrhage along their sides. Some slight hæmorrhage into the membranes over the pons and medulla. Surfaces of cerebrum normal and cerebellum normal, and shew no laceration whatever. Section of cerebellum shews a hæmorrhage into the middle lobe about three-quarters of an inch in diameter. This hæmorrhage

extends slightly into the two lateral lobes, and it has burst through the middle lobe into the fourth ventricle, which is filled with clot compressing the floor of the ventricle, and limited by the membranes laterally. The clot spreads upwards into the third and lateral ventricles, filling them loosely. The crura cerebelli were normal. On careful examination of the vessels of the brain, no disease could be found and no signs of any miliary aneurisms. There was no thrombosis. No fracture of skull.

Heart was normal. No hypertrophy of left ventricle.

Lungs normal.

Kidneys two and a half ounces each; healthy. Capsule stripped readily. Microscopic examination, normal. Other organs normal.

Notes.—As these cases of cerebellar hæmorrhage present a series of symptoms which are by no means distinctive and their diagnosis is difficult, it may be interesting to review the symptoms as shewn in the published cases.

In idiopathic cases there may be premonitory symptoms, but in the "majority of cases there are not." When present, they are headache, vertigo and giddiness, numbness, and formication of the fingers and toes, involuntary movements of the head to one side, and drowsiness. These symptoms, with the exception of the movements of the head, which may be suggestive, are of little help in enabling us to diagnose the condition.

Pain in the head is the first symptom, and this may be very severe, as in this case. It may be either frontal or occipital, and become constant. In some cases it is entirely absent.

As a rule the *intellectual faculties* are unimpaired in cases of cerebellar hæmorrhage, the patients being able to answer questions intelligibly. The patient in some cases is in a state of torpor and not able to talk at all or only with difficulty, and yet be perfectly intelligent. Again, in a few cases there may be a deep coma out of which it is difficult to rouse the patient who may only respond by opening his eyes.

As distinguishing this coma from that due to cerebral hæmor-

rhage Hillairet ¹ maintains that it is easier to rouse the patient from cerebellar coma than from cerebral. Cerebellar coma is a physical one, while cerebral is an intellectual one. He insists that there is no loss of the intellectual faculties in the coma due to cerebellar hæmorrhage, and the patients seem to be simply in a deep sleep. Brown-Séquard ² agrees with this, but points out that it is also true of many cases of cerebral hæmorrhage where the amount of blood is small. As in cases of cerebral hæmorrhage the coma may come on early or be delayed for hours, days, or months, or it may cease and re-appear several times.

One of the most important and constant symptoms is *vomiting*. It occurs in the majority of cases, and may be persistent, continuing for many days. It is said to be accompanied by less retching than that due to disease of the cerebrum. Hillairet and Remak ³ maintain that this symptom is constantly present, but this has been disputed by others (Shearer, Lever, Ollivier). ⁴ It was present in this case, and was due, as it is in the other cases, to pressure on the medulla by the clot.

Another important symptom is *incoördination of movement* or an intense vertigo. This may be present without any paralysis, and may lead one, when associated with the sickness, into the error of diagnosing the case as "drunk," and this is all the more likely when the patient has had some alcohol. Brodribb ⁵ records a remarkable case where this symptom deceived the patient herself into thinking she was drunk.

As a rule, there is *no paralysis* with this incoördination. The patient may be unable to walk or stand, but when placed in bed is found to be able to move all his limbs. The movements of both sides are generally, however, performed with a certain amount of sluggishness and weakness; and this would seem to support Schiff's theory that the cerebellum acts as an intensifier of the movements of the limbs, and particularly those finer movements which fix the limbs and joints. This absence of paralysis will serve to distinguish cerebellar from cerebral hæmorrhage; and a confirmatory fact may be found in the absence of facial paralysis in the former.

Hemiplegia may however sometimes occur, and when it does, it is usually in the side opposite the hæmorrhage. It is not, as a rule, due to direct injury of the cerebellum, but to the action of the lesion upon other parts of the nervous system.

Anæsthesia or Hyperæsthesia is rare. Hemianæsthesia may be produced by pressure on the tegmentum.

Erection of the penis and increased sexual desire has been noted in a few cases, and it seems to be due rather to irritation of the posterior surface of the pons and medulla than to the injury to the cerebellum, as Gall and Serres maintained.

The breathing may be at first stertorous, but becomes slow and shallow, and finally ceases, the heart in the meantime continuing beating. The patient dies of asphyxia, and as this difficulty of breathing is more common in cases of cerebellar than in cerebral hæmorrhage, so is the former proportionately more fatal.

Deviation of the head or eyes may be present if the crura cerebelli are implicated.⁶⁶ The pupils are more often affected in cerebellar than in cerebral hæmorrhage, being sometimes contracted and sometimes dilated.

One of the conditions from which the cases have to be diagnosed is opium poisoning, and this should be borne in mind: when a patient is seen without history, lying unconscious, with contracted pupils and shallow breathing, the differential diagnosis is indeed difficult or well-nigh impossible.

In this case an important point was the fact that so severe an injury had taken place, and yet not the slightest external evidence of any bruise of the head could be found. It was thought that the hæmorrhage was idiopathic; but as the most careful examination of the arteries for any miliary aneurism or fatty degeneration shewed them perfectly healthy, and as the heart and kidneys were normal, one was forced to the conclusion of a traumatic origin.

I am indebted to Mr. A. Lucas, Assistant-surgeon to the General Hospital, for the clinical notes of the case.

BIBLIOGRAPHY.

1. Hillairet—On Cerebellar Hæmorrhages.—*Archives Générales de Médecine*, etc., 1858, vol. xi., fifth series, p. 430.
2. Brown-Séquard—*Lancet*, vol. ii., 1861, p. 391.
3. Remak—*Berl. klin. Wochenschrift*, 1865.
4. Shearer, etc.—*Archiv. Génér.*, Nov., Dec., 1862; Janvier, 1863.
5. Brodribb—*Lancet*, 2/77, p. 448.
6. Curschmann—*Deutsch. Archiv f. klin. Med.*, 12 Bd.
Nonat—*Comptes Rendus*, 1861.

A CASE OF THROMBOSIS OF THE BASILAR ARTERY.

BY S. H. PERRY, M.B.,

HOUSE PHYSICIAN TO THE BIRMINGHAM GENERAL HOSPITAL.

THE patient, S. S., was admitted to the General Hospital under the care of Dr. Rickards on December 5th, 1893. He was then suffering from chronic bronchitis and cardiac dilatation, and was much cyanosed. Venesection was performed on the day following, twenty-one ounces of blood being abstracted, with considerable relief to the cyanosis and dyspnoea. The urine was acid and gave a light cloud of albumen on boiling; no casts were seen. During the following fortnight the condition did not vary to any extent, cyanosis being at all times a marked feature of the case.

During the morning of Jan. 11th the patient was observed to be peculiar in manner and somewhat wandering. Shortly before mid-day he raised himself in bed and stretched across to the bed of the adjoining patient, a much greater amount of exertion than he had undertaken since his admission. About mid-day he suddenly developed convulsions and Cheyne - Stokes respiration. There was slight rigidity of both arms, with clonic spasm of the muscles of both arms and of both sides of the face; the convulsions being, however, most marked on the left side. The legs were not affected. The pupils were equal and reacted to light. The knee-jerk was present on both sides, as also were the superficial reflexes. One hour later neither superficial nor

deep reflexes could be obtained. The patient was not insensible, being able to answer questions and to recognise people around him.

Venesection was at once performed, twenty ounces of blood being taken. No relief to the symptoms followed this treatment. As regards venesection, the idea was that the patient was suffering from ingravescient hæmorrhage, though the cardiac condition would certainly have favoured thrombosis.

During the next four hours the condition did not change, except that the respiration became gradually more marked in type. The patient died six hours after the onset of the attack. Half an hour before death he became comatose, with flaccid limbs, the pupils being fixed and somewhat dilated.

The *post mortem* examination shewed a considerable thrombosis of the basilar artery, extending also a quarter of an inch into the right posterior cerebral artery and less into the left posterior cerebral. The cerebral arteries were atheromatous and calcareous to a considerable extent. The heart was hypertrophied and dilated.

PERISCOPE.

OBSTETRICS.

BY FRED EDGE, F.R.C.S., WOLVERHAMPTON.

It is impossible to begin these notes without a reference to the recent letters which have been published by Dr. Playfair on the one hand, and Drs. Cullingworth and Herman on the other hand, with reference to puerperal septicæmia and its causation by defective sanitation. Dr. Playfair holds that defective sanitation, by its products—sewer gases—is capable of producing puerperal fever, or symptoms almost indistinguishable, and that this method of origin of puerperal fever is important and fairly

frequent. Drs. Cullingworth and Herman, whilst granting that defective sanitation may possibly cause serious illness, at the same time assert that there is not one particle of scientific proof of this manner of causation of puerperal fever; and they lay great stress on the necessity for teaching that puerperal fever is practically always due to "dirty touch" of hands or instruments.

There cannot be any doubt but that the looking upon all cases of puerperal fever as caused by "dirty touch" is the certain means to attain success in obstetric practice, and that the instant we begin to allow such cases to be put to the credit of auto-infection and bad sanitation, we open a loophole through which medical men and midwives escape from merited censure through neglect of the first law of medicine—"Be clean."

Symphysiotomy still occupies the earnest attention of obstetricians, and many cases have been reported of its successful carrying out; and it must also be said many unsuccessful and even fatal cases have occurred, so that it must be clearly recognised that it is not a minor but a major operation.

As to the method of operating, whether openly or subcutaneously, with a blunt tipped tenotomy knife, it can only be left to the predilection of the operator; but if the subcutaneous method be used, the suture of the separated pubic bones is almost impossible, at any rate with any degree of accuracy.

As there have been no cases reported in the Midlands to my knowledge, it may be proper to briefly state the conditions under which the operation is to be undertaken, and the advantages. Symphysiotomy should be performed instead of craniotomy, cephalotripsy, Cæsarean section, or Porro's operation when the true conjugate is not less than $2\frac{5}{8}$ in.; when there is no other obstruction besides pelvic malformation, such as tumours of bone or carcinomata, and both sacro-iliac synchondroses are free and not ankylosed; the child is alive. The advantages are—first, the living child; and, secondly, less danger to the mother. The disadvantages are that the operation may not be successful owing to undiagnosed conditions, and it may be necessary to proceed to craniotomy or Cæsarean section. The

child may not be saved, and the sacro-iliac synchondroses may be injured by too much strain being thrown upon them in the separation of the split symphysis.

In the *American Journal of Obstetrics* for November, 1893, Ayers, of New York, in speaking upon puerperal infection, says, when this is located in the uterine cavity: "When we consider that within this cavity there may be blood clots, varying from the size of a hazel nut to that of a cocoa nut, that must decompose if not expelled by after-pains; pieces of placenta, decomposing fibroids, a gangrenous endometrium, underneath which festering mass and within its cavernous meshes thrombi and germs rest in contact, need we wonder that in many cases the inhibition of drugs becomes a farce, and uterine irrigation a delusion and a snare? The rules of surgery call here, as elsewhere, for thorough removal of *débris*, drainage, and disinfection."

Irrigation of course is the first means to be employed, but unless quick, almost immediate benefit follows, we must proceed to curetting with a blunt curette, since with a sharp one we only make new surfaces for septic infection. Gentle compression of the fundus uteri will of course aid in getting rid of coarser clots and sloughs. The introduction of iodoform gauze into the uterus up to the fundus is necessary after the curetting and irrigation, as otherwise these procedures are often useless. "Iodoform gauze—cut in a strip from two to three inches wide, with no loose fringe, and from one to two and a half yards long—packed well into the fundus, down to and through the cervix into the vagina, gathers loose *débris* of blood, pus, membranes, and germs in its meshes, provides uninterrupted drainage, stimulates granulation, and excites uterine contraction. It may be left *in situ* 24-72 hours, according to the symptoms."

When the septicæmia grows worse despite our treatment, the question of celiotomy or abdominal section comes in. Here we are very much at sea, as, so far, there are not any definite landmarks fixed. We must have the different

forms of puerperal peritonitis clearly worked out. It is evident that to irrigate the peritoneal cavity in a case where the peritoneum is surrounded without with pathogenic material seems useless, whilst in a mild case, with two or three pockets of pent-up pus, operation may be very useful. There is this to be said for operative interference in these cases of puerperal peritonitis—namely, that in malignant cases it will not hasten death very much, and it is possible may prevent it, and in the mild forms it is the most rational procedure.

Abdominal hysterectomy has been very successful in early cases, and is well worth the surgeon's thought.

At the meeting of German gynecologists at Breslau, in May, reported by Dr. Wehle in the *Archiv für Gyn.*, there was an interesting communication by Dührssen on the importance of mechanical dilatation of the os uteri in midwifery. It may be noticed here that De Ribes, of Paris, has laid stress on this also, and invented his own peculiar colpeurynter. Mr. J. W. Taylor's "artificial amnion" precedes them both, but it has not been boomed sufficiently upon the medical market or mind. To return to Dührssen. He uses a colpeurynter of $\frac{3}{4}$ litre capacity, which is the size of the foetal head when dilated. When very rapid dilatation is necessary, he keeps up a continuous pull on the lower end of the colpeurynter, but when rapid dilatation is not wanted, he keeps up a gentle drawing on the colpeurynter by tying the rubber band or tube to the foot of the bed. He recommends the method—

1. For rapid carrying out of induced labour.

2. In placenta previa. It is introduced through the punctured membranes, and then its rubber band tied to the foot of the bed so as to maintain an even tension. The attendant waits until the colpeurynter is born. Then, if bleeding recommence, turning and extraction are performed. This method has advantages over combined version, in that the child's life is in less danger and the procedure is lighter.

3. In cases of premature rupture of membranes with flat pelves and faulty positions. Here, of course, delay is dan-

gerous, and the spontaneous dilatation of the cervix very slow, so that turning may become difficult, dangerous, or even impossible, and the mother and child may be in danger of death.

4. When the mother or child's life is in danger, as in eclampsia and heart disease of mother or asphyxiation of child.

5. In simple uterine weakness and premature rupture of membranes. Here the colpeurynter need only be half filled. When the supravaginal portion of the cervix is opened up in a primipara, and the cervical obstruction to delivery lies in the vaginal portion of the cervix, Dührssen considers that incisions in this portion are the safest if not always the simplest method.

In the same volume of the *Archiv für Gyn.* is Dührssen's exhaustive paper on the value of deep cervical and perineal incisions in midwifery. Leaving out his carefully and scientifically worked out cases and proofs, we will take his conclusions. These are, in brief, that—

Deep cervical and perineal incisions are of great practical use, and are without danger when performed aseptically.

They do away with perforation of the child, induced labour, and Cæsarean section in certain cases.

The mortality in 27 cases was 1, or 3·7 per cent.

Many children's lives are saved by the perineal incisions, and severe lacerations are warded off the mother.

The simple indication is that of danger to mother or child in eclampsia, premature rupture of membranes, and in aged primiparæ.

There must be no pelvic obstruction, and the supravaginal portion of the cervix must be dilated. This can be done with the colpeurynter.

Outward pressure and the oblique position of the forceps will assist much.

Four incisions are made—one behind, two lateral, and one in front. All include the whole thickness of the vaginal cervix, and go to the insertion of the vagina into the cervix: it is not necessary to suture them afterwards.

The perineal incision is better one-sided than multiple. It

is made on right side, half way between the anus and the right tuber ischii, and runs backwards to just behind a line joining these two landmarks. After birth it is closed with sutures.

In no case has prolapse supervened after perineal incision.

In 21 cases of cervical incisions, 15 (71·4 per cent.) within eighteen months have given birth again without any trouble.

In the *American Journal of Obstetrics*, July, 1893, Green gives the results at the Boston Lying-in Institution during the last eight years as regards puerperal eclampsia.

There were 13 cases of antepartum convulsions, 8 cases of interpartum, and 15 cases of postpartum—36, 22, and 42 per cent. respectively.

Ether was given to control the convulsions, chloral hydrate per rectum as a sedative between attacks.

The skin was excited to action by hot air baths or bed heaters. Pilocarpin (one-sixth grain) was given, guarded by brandy to prevent depression.

Elaterium, croton oil, and enemata are used, unless the skin reacts very well.

Milk and brandy are given when the patient can swallow, and she drinks freely of cream of tartar water (four grains to the pint) as a diuretic and cumulative cathartic.

Digitalis in small doses sustains the heart and helps diuresis.

Venesection was not used.

In three antepartum cases, with nonviable foetuses, there was no obstetric interference. Two children were born alive later, and all the mothers lived. Maternal mortality 0 per cent., foetal 33 per cent.

In six antepartum cases, with nonviable foetuses, obstetric interference was necessary. Manual dilatation and podalic version was preferred. In one case the cervix was incised. Three mothers and, of course, six children died. Mortality of mothers 50 per cent., children 100 per cent.

In four antepartum cases, at a viable period, labour was induced, with results to mothers 75 per cent. mortality, children 50 per cent.

All antepartum cases grouped give 46 per cent. maternal and 69 per cent. foetal mortality.

In the interpartum cases, eight in number, operative delivery was used, and the mortality was 25 per cent. for both mothers and children. Forceps were used in four cases and version in four.

In the postpartum eclampsia cases (fifteen) twelve were primiparæ, all but one were at full term. Only one mother was lost, and she died of pulmonary œdema.

Hot air baths, blankets and heaters, hot drinks, pilocarpin, digitalis, chloral and bromide, etc.

Of the children, one had died of cerebral hæmorrhage and another was nonviable. The mortality was thus 62·3 per cent. for mothers and 12 per cent. for children.

On the whole series, the maternal mortality was 25 per cent. and the foetal 34 per cent. If the children in the postpartum cases are not included, the foetal mortality is 52 per cent.

The practice in Boston has not been to urge quick delivery so much as is the case with Dührssen, of Berlin, who makes deep cervical and perineal incisions and delivers at once. His mortality in ante- and interpartum cases was about 20 per cent., as compared with 38 per cent. at Boston.

As regards the use of morphia, both Dührssen and Green are against its use. Green seems to give ether more freely than Dührssen recommends. It is to be noted that the German pathologists found marked changes in the kidneys and nervous system in cases of long-continued anæsthesia, which they ascribe to the action of the anæsthetic.

In the *American Journal of Obstetrics* for November, 1893, is a short review by Dr. Julius Rosenberg of the Report from the Dresden Royal Lying-in Hospital (*Arbeiten aus der Königlichen Frauenklinik in Dresden*). S. Hirzel, Leipzig, 1893. As I cannot obtain the original very easily, and since the matter is of very vital importance, I shall not make any further apology for extracting Rosenberg's interesting review than that of saying that I know Rosenberg and was with him at Dresden, and his

sentiments are exactly what I should desire to express myself.

Burchbeck confines himself to the induction of premature labour, and reports 81 cases. Rosenthal discusses 102 cases of version and extraction in pelvic contraction. Zeitelmann's material comprises 121 craniotomies, and Cörner reports 50 Cæsarian sections. Wehle writes a *résumé* on Symphysiotomy. (This was in *Medical Review* in last Obstetric Periscope).

There is an account of the management of this peerless Institution. The hospital has larger material than any other German clinic, and its director, Professor Leopold, stands high amongst the lights of Gynæcology. The cordial reception which one meets there, and the generous liberality with which the rich material is placed at one's disposal, are a pleasant contrast to many similar institutions in which the doctor is an unapproachable monarch, and the assistants treat the anxious seeker after knowledge as an intruder, only tolerated after paying handsome bribes in the shape of fees for so-called special courses.

The book closes with a chapter by Leopold who discusses the various operations, their indications, advantages, and shortcomings. A few of his deductions are reproduced.

A conjugata vera of 7 cm. in a flat rachitic pelvis, and 7.5 cm. in a uniformly contracted pelvis, are lowest limits for which premature labour may be induced with any prospect of favourable result.

The results of premature labour are as yet decidedly unsatisfactory. We must strive to avoid infection, discover means to induce labour more rapidly, prevent the premature rupture of the membranes, seek the most opportune time at which to induce labour, and surround the premature child with conditions most favourable to its future welfare and development.

The statistics of version in contracted pelvis must also improve. The reports of death from hæmorrhage or infection must cease. The most favourable moment for the performance of this operation is a fully dilated os with membranes intact. Undue haste must be avoided. The extraction of the head should never be hurried. By introducing the finger into the

child's mouth sufficient air may be inspired to prevent asphyxia.

If the pelvic contraction extends below the above-mentioned measurements—7 and 7.5 cm. respectively—craniotomy, symphysiotomy, and Cæsarean section come under consideration.

It is doubtful whether the perforation of the living child will ever cease to be a justifiable operation; but it seems as if symphysiotomy is destined to limit the scope of both the relative Cæsarean section and craniotomy. Yes, it is probable that the relative Cæsarean section will be entirely displaced through symphysiotomy.

Leopold warns us not to be too hasty in accepting this operation. The indications and limits have not been sufficiently studied to warrant its universal and indiscriminate performance, and if the warning cry is not heeded, we may again be confronted with the terrible statistics of the old Cæsarean section.

THERAPEUTICS.

BY T. SYDNEY SHORT, M.D.

The Therapeutical Value of Rest in the Treatment of Chlorosis.—Dr. F. Taylor has a paper on this subject in the *Practitioner* for September. His experience has led him to believe that exercise counteracts the effects of iron in this disease, and should not therefore be indulged in. He considers that rest tends to prevent the dilatation of the heart so frequently met with in cases of chlorosis.

In the *Therapeutic Gazette* for October, Drs. Hare and Thornton contribute a paper entitled, *A Study of the Influence of Chloroform upon the Respiration and Circulation. One of the reports to the Hyderabad Commission, and sent from the Jefferson Medical College, Philadelphia.* The subject is treated of very fully in this paper, and is illustrated by records of experiments and tracings. It is also published in the *Lancet* for October 31st, without the tracings. The principal conclusions are that

the respiration should be carefully watched, because irregularity of some kind always occurs before cardiac failure, which itself is due to over-dose by the lungs of the anæsthetic, and that chloroform kills by failure of respiration when it is inhaled in those cases in which the heart is healthy, or in which it has not been rendered functionally incompetent by struggling or by marked asphyxia. They draw special attention to the importance of providing the patient with plenty of fresh air during the administration.

Rubidium Iodide as a Substitute for Potassium Iodide.—An article appears in the *Therapist* for October with this heading. It is claimed for the drug that it is better borne by the stomach, and is not so likely to produce iodism. It seems that in some persons who are very susceptible to iodine the rubidium iodide will produce symptoms of iodism; but even in these patients, after the potassium salt has been pushed to its furthest limit, the rubidium compound may be given without inconvenience. In weak cardiac conditions it is especially recommended on account of the absence of the depressing effect due to the potassium.

Benzole in Influenza.—Dr. William Robertson, Newcastle-on-Tyne, writes to the *Lancet*, November 11th, that five minims made into an emulsion with lemonade, and given every two hours, have the effect of bringing down the temperature altogether after the first twenty-four hours, cut short the disease, and remove the tendency to serious after-effects met with in this disease. He compares the good effect observed in the treatment of influenza to that seen in the exhibition of the same drug during the course of whooping cough.

Chlorate of Potash in Threatened Abortion.—In the *Lancet* of October 23rd Dr. E. F. Pratt, Newcastle-on-Tyne, records two cases of threatened abortion treated by the administration of chlorate of potassium with successful results. In both cases the drug was given in ten-grain doses at the fifth month, and continued throughout the pregnancy; but as it brought on albuminuria in one of the cases, it was omitted for about ten days. There was a syphilitic history in one of the cases.

Measles treated by Inunction of Eucalyptus.—Dr. C. E. Shelly writes his experiences of this method of treatment in five cases of measles (*Practitioner* of November). The bodies of the patients were rubbed with the preparation in use night and morning for three days, and then once a day for a week. The drug was also given internally, and was placed about the rooms, and if a cough were present, used in an inhaler. These cases, however, did not do so well as those treated on a simple saline mixture, and the method was abandoned. The eucalyptus produced the following symptoms:—Drowsiness, dulling of sensation, abnormally furred tongue, relatively prolonged pyrexia, delayed eruption, and exaggerated implication of the mucous membranes and the skin.

Exalgin as an Anodyne.—In the *Lancet*, November 25th, Dr. Thomas D. Savill relates his results with exalgin given in various cases for the relief of pain of a neuralgic character. He finds that a convenient way of preparing it is to pour six ounces of boiling water on forty-eight grains of the salt, no separation occurring on cooling. One teaspoonful of this preparation contains one grain of the salt. From one to three grains were given every four hours, with relief of pain in each instance. No bad effects were noticed even in cases of phthisis or heart disease, and no symptoms of intoxication were seen in any case. He recommends that it should not be given when a febrile temperature is present, or in cases of constipation.

Carbolic Acid for Diarrhœa (ibid).—Dr. J. Ritchie recommends it given in pills coated with keratin. Each pill contains two and a half grains, and one is given every three hours. He has not found it necessary to administer more than from six to twelve pills in all.

The Clinical Journal has notes on the following subjects:—

Arsenic Hypodermically (Journ. Amer. Med. Ass.).—Dr. Moyer states that arsenic given hypodermically is much less poisonous than when given by the mouth, for in the latter case it focusses itself largely about the upper end of the intestine and in the stomach and liver. In place of Fowler's solution

he prefers to use a solution of sodium arsenate of one per cent. strength. This, he says, contains about twice as much arsenic as a one per cent. solution of pot. arsenatis. He has found it especially serviceable in chorea, but has seen no benefit from its use in paralysis agitans and in cases of neurasthenia.

Guaiacol in Enteric Fever.—Dr. Baker extols this drug for the treatment of enteric fever in doses of five minims three times a day after food. (*Med Record.*) He claims that it causes a fall in the temperature, a decrease in the rapidity in the pulse rate, disappearance of tympanites and diarrhoea; while the tongue becomes moister and cleaner, the nervous symptoms completely subside, and the patient proceeds to a state of complete recovery.

Nitroglycerine in Epilepsy.—Dr. H. Elliott Bates, while not claiming any curative action for this drug in epilepsy, states that one-hundredth of a grain injected hypodermically, when the attack is fully developed, cuts short the fit, and therefore lessens fatigue and tends to lessen the after-effects of the convulsive attack. (*N. Y. Med. Jour.*)

Chlorobrom in Sea-sickness.—Dr. J. A. Boyd (*Lancet*, December 3rd) relates his experiences of this drug on board ship. He found that one-drachm doses given in solution a few hours after the departure of the steamer, and continued each night if necessary, produced most beneficial results. At the same time he excluded from the dietary soup, vegetables, and pastry, and only permitted weak tea and toast for breakfast.

Treatment of Exophthalmic Goitre.—There is a paper on this subject by Dr. J. Madison Taylor in the *Medical News* of Dec. 16th and 23rd. He has found hydrobromate of hyoscine useful in this condition, and gives a series of cases in some of which this drug was exhibited.

Clinical effects of Hyoscine Hydrobromate.—With the object of testing the hypnotic effects of this drug Dr. G. Sharp, of Leeds, gave it in cases the notes of which he publishes (*Pract.*, Jan.). Two of these were suffering from delirium tremens, and gr. $\frac{1}{6}$ injected into the gluteal region seems to have produced alarming

symptoms without the least hypnotic result. Dr. Sharp appears to suggest that in one case at any rate the patient was made much worse, and a fatal result ensued. In another case of insomnia gr. $\frac{1}{75}$ altogether failed to produce sleep.

Poisoning by Chloral Hydrate.—A boy aged 16 years was admitted under the care of Dr. Selby Plummer into the County Hospital, Durham, having taken a lethal dose of this drug in crystal. The amount swallowed was calculated to be probably over one ounce. The lad never recovered consciousness, and died after thirty-nine and a half hours had elapsed, in spite of all efforts to resuscitate him. It is interesting to note that in this case the pupils were contracted and remained contracted throughout.

In Dr. Burney Yeo's recently-published book titled "A Manual of Medical Treatment or Clinical Therapeutics" (Cassell and Co.), we have the most important publication on therapeutics that has been given to the profession lately. Dr. Yeo has written a very readable and instructive manual on disease from the point of view of treatment. The divisions of the subject are pretty much those with which we are familiar in manuals of medicine, but a brief *résumé* only is given of the disease, and then the treatment is detailed in full, with the addition of admirable formulæ at the close of each chapter.

Case of Aniline Poisoning.—Dr. F. J. Smith (*Lancet*, Jan. 13th) relates a fatal case in a woman, æt. 42 years, due to swallowing three ounces of marking ink consisting principally of aniline. Death ensued after twelve hours had elapsed. The chief symptoms noted were: the lips were of a dark purple, general surface of the skin was of a deadly white with a slight bluish tinge; the conjunctival reflex was present, the pupils were small with very sluggish and slight reaction to light; the breathing was slightly stertorous, and the pulse was full and slow, 60 a minute; there was feeble twitching of the muscles of the fingers of both hands. Vomiting did not occur. The stomach was washed out, ether injected subcutaneous, and oxygen inhaled. The woman never regained consciousness and died comatose.

REPORTS OF SOCIETIES.

BRITISH MEDICAL ASSOCIATION. BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

The fifth meeting of the Session 1893-4 was held on Thursday, February 8th, 1894, Dr. RICKARDS, President, in the chair.

Mr. H. Sinigar, M.R.C.S., and Mr. Guy Grindlay, M.B., were elected members of the Branch.

Gall Stones.—Mr. Lawson Tait shewed a number of gall stones (there were over fifty in all) removed from a girl aged 19, in whom there was nothing but the subjective history. The diagnosis was made by Dr. Purchan, of Newtown, who sent her for operation. That was a matter of no difficulty, and her recovery was speedy. The only remarkable feature of the case was the youth of the patient.

Calculus.—Mr. Lawson Tait shewed a remarkable specimen of a calculus which had doubtless been originally formed in the appendix vermiformis, and had given rise to prolonged ill health with several relapsing illnesses which were regarded as typhoid fever. At last the case settled down into what was looked upon by Dr. Campbell as an abscess of the right Fallopian tube. Mr. Tait was summoned to Saddleworth to operate, and removed the calculus (about an inch and a half long and as thick as slate pencil) from a cystic cavity containing fœtid pus and formed of a distended tubular structure lying behind the uterus and intensely adherent to it. This cyst Mr. Tait removed with great difficulty, and at the time said that though its relations were those of the Fallopian tube its calculus was that of a cæcal appendage, as he had often seen the latter, but never had seen a concretion in the Fallopian tube, save of a curious kind. The latter alternative was proved to be the correct one by the passage of fæces through the drainage tube on the second day after the operation. The patient is now making an excellent convalescence.

Phosphatic Calculi.—Mr. Jordan Lloyd shewed five phosphatic calculi, weighing four ounces, successfully removed by supra-pubic lithotomy from the bladder of a man aged 65 years. The patient had been “cut for stone” on three previous occasions; twice through the perinæum and once above the pubes. The operation was made easier by the adhesions resulting from the former high operation; the incision being made through the old cicatrix. The patient sat up on the third day and made a quick recovery.

Dr. Leslie Phillips shewed cultures of *Staphylococcus pyogenes citrens* and *Streptococcus pyogenes* derived from a case of frozen-meat impetigo. The patient was a salesman of frozen-meat, and the present was the second attack within three years of the disorder, which affected only the hands and forearms. The impetigo left scars, and was not accompanied with erysipeloid erythema.

Resection of the Right Lobe, Isthmus, and part of the Left Lobe of the Thyroid Gland.—Mr. F. Marsh shewed a girl, æt. 20, upon whom he had performed the above operation for relief of pressure symptoms caused by a bilateral parenchymatous bronchocele. The part removed, which weighed sixteen ounces and a half just after operation, was also shewn. The details of the case were given in the paper subsequently read by Mr. Marsh.

Thyroidectomy.—Mr. Bennett May shewed a young man on whom he had performed thyroidectomy, removing the right lateral lobe and isthmus for the relief of pressure symptoms and stridor, with successful result.

Papers.—Dr. Pietersen read a paper on “Mental Disorder as a Symptom in Diseases of the Nervous System.”

Mr. Marsh read a paper on the treatment of bronchocele, with notes of five successful cases of thyroidectomy, of which the following is an abstract:—Bronchocele; clinical varieties; therapeutic treatment; cases requiring operative interference; brief review of methods of operation; method adopted in this series of cases; points of interest in each case,

PATHOLOGICAL AND CLINICAL SECTION.

The third meeting of the session was held in the Medical Institute on Friday, January 26th, at 8 p.m. The Chairman, Mr. BENNETT MAY, presided.

Specimens.—Dr. Sinclair shewed specimens from two cases of intra-ocular sarcoma.

Extensive Endocarditis.—Dr. Foxwell shewed a heart exhibiting recent vegetative endocarditis on all four valves, though the pulmonary and tricuspid were but slightly affected. The patient had been ill six months with general anasarca, and had had very varying murmurs at all four orifices; but, though varying, they were so persistent that definite imperfection of the four valves had been diagnosed during life. There was antecedent rheumatic fever three years ago. Whilst in hospital she suffered from acute cardialgia, with paroxysms of dyspnoea and sleeplessness. The temperature was typical of chronic ulcerative endocarditis, but there were no embolisms.

Mr. Heaton shewed the following specimens and read notes of the cases:—

Specimen 1. *Sac of Strangulated Encysted Hernia, with undescended Testicle, removed from the groin.*

Clinical History.—Man, aged 45, November, 1892. Had had several attacks of acute orchitis in left testicle as it lay in groin, and has had lax swelling in groin for many months.

On admission, symptoms of intestinal obstruction two days. Lax fluid swelling in left groin. Hard tender tumour to be felt through fluid.

Herniotomy.—One to two ounces of clear yellow hydrocele fluid evacuated, exposing tense thick-walled tumour having testicle attached to its lower part. Swelling incised, six drachms dark-coloured serum let out. Gut seen at bottom of sac. Reduced. Sac excised at internal abdominal ring.

After History.—Soundly healed, and well in ten days.

Specimen shews parietal layer of tunica vaginalis left *in situ*. Curious partition in sac with ragged circular opening.

Specimen 2. *Parts removed post mortem from case of strangulated intra-parietal Hernia.*

Male, aged 27. Always had swelling in right side of scrotum. Symptoms of intestinal obstruction on the day of admission. Hernia in right side. No testicle to be detected in scrotum. Hernia tense and tender, but distinct impulse. Irreducible.

Herniotomy, owing to urgent symptoms. Contained much blood-stained fluid. Small knuckle of intestine at neck of sac. Easily reduced without incision, sac washed out. Attempt made to withdraw coil for examination unsuccessful, though finger appeared to be in peritoneal cavity.

Comfortable for two days. Vomiting slight on third and fourth days. Much restlessness, worst symptoms. Fifth day marked abdominal tenderness. Purgative enemata given without relief. In morning sudden collapse, extremities cold, pulse 164. Diagnosis between unrelieved obstruction and acute peritonitis. Condition such as to preclude operation. Sixth day died.

Post mortem examination shewed peritonitis in lower half of abdomen. Lying in the iliac fossa, and over the situation of the internal abdominal ring, was a tumour (the specimen shewn), lined on the outside and inside with peritoneum. It communicated with the peritoneal cavity by a small opening, through which passed coils of small intestine tightly strangulated. The testicle lay on the outer wall of the sac, projecting into its interior and slightly below and external to the internal abdominal ring. The scrotal sac, ligatured and excised, was a diverticulum from this sac, and communicated with the general peritoneal cavity only through it.

The specimen shews this sac as it lay in the sub-peritoneal tissue, the intestine, still *in situ*, strangulated. The opening in the sac is where the scrotal hernia communicated with it. It is a good example of the hernia *en bissac* of French authors, or intra-parietal hernia.

The anatomical conditions of the hernia explain—

1. The presence of an impulse in the strangulated hernia.

2. The easy reducibility of the intestine at the operation, though it had the appearance of being tightly strangulated. It was only pushed from the scrotal diverticulum into the main sac.

3. The continuance of the symptoms and death from unrelieved obstruction illustrates the importance of always withdrawing the coil of intestine before finally reducing it, to see its condition and to see that it is quite free. Could not do so in this case.

It is a specimen of a hernia which would more easily have been diagnosed by abdominal section and relief of the structure from within the abdomen more easily. But we must operate for the rule and not the exception.

Tubercular Necrosis of Laryngeal Cartilage with Stenosis.—

Mr. Barling shewed the Larynx taken from a middle-aged man, the subject of old phthisis. When first seen the patient was suffering from a good deal of laryngeal obstruction, and this was found to be due to extensive tubercular disease of the ary-epiglottic folds and the inter-arytenoid space. The left cord was adducted and quite fixed, the right made but slight excursion in abduction so that the stenosis was extreme. Tracheotomy was arranged for the next day, but the man died during the night apparently of syncope.

Acute Infective Periostitis and Osteo-myelitis commencing in the neck of the Femur within the capsule.—Mr. Barling shewed the upper fourth of a Femur taken from a boy aged 15, who, without previous illness or injury, was seized with severe pain in his right hip-joint. The joint became flexed and abducted, there was fulness in Scarpa's triangle, fever, and some delirium at night. The condition was diagnosed, and pus being obtained by aspiration from the front of the joint the cavity was drained by an anterior incision. Subsequently the right, and later the left elbow joint suppurated, and the boy died at the end of three weeks. There was not a single rigor throughout the illness, the most marked feature of which was the severe delirium. The specimen shewed a good deal of erosion of the cartilage on the

head of the femur and stripping of periosteum and attachment of capsule from the neck of the bone. There was some pus in the cancellous tissue.

Trephining for Middle Meningeal Hemorrhage.—Mr. Haslam read notes of a case in which he had trephined successfully for hæmorrhage from a small branch of the middle meningeal artery. The clot was not situated over the motor area, but in a position over the angular gyrus and occipital lobe, and the pressure on the brain had interfered with the paths from the motor area through the posterior limb of the internal capsule.

MIDLAND MEDICAL SOCIETY.

A meeting of the Midland Medical Society was held on Wednesday evening, January 17, the President, Dr. A. H. EVANS, in the chair.

Mr. Wood White shewed for Dr. Partridge, of Stroud, two large intestinal calculi removed from a horse in which they had caused fatal intestinal obstruction. The larger of the two measured ten inches in circumference, and was situated in the colon. The stones were composed chiefly of triple phosphates. The animal had a year or two previously passed a similar stone.

Such stones, according to Dr. Partridge, are especially common in horses fed on meal and beans, and occasionally reach the weight of fifty pounds.

Dr. Malins shewed a spleen weighing 2 lbs. 5 oz. removed on January 2nd. The patient, ætat 32, was admitted to the General Hospital on December 31st with an abdominal tumour reaching mainly from the right hypochondrium to the left of the pelvis; some peritonitis, a high temperature, and quick pulse. The abdomen was opened in the middle line and the tumour found to be the spleen twisted for half a revolution on its axis; the vessels on the distal side thrombosed, and the spleen discoloured and congested. A single silk ligature was tied round the proximal side of the obstruction and the spleen removed. The

patient recovered without a bad symptom, and has since left the hospital at the end of three weeks, saying that she is better than she has been for many months past.

Mr. George Heaton shewed a uterus removed by Porro's operation for rupture during labour.

The patient, a multipara aged 25, was admitted into hospital with a large rent in the uterus, through which the foetus had escaped into the abdominal cavity. Abdominal section was performed and, as there was free hæmorrhage from the rupture, the uterus brought out of the abdomen and clamped round its neck with a wire clamp. The body of the uterus was then excised, the abdomen washed out, and the stump of the uterus treated in the usual manner. There was no more hæmorrhage, but the patient died of shock eleven hours after the operation. The specimen shewed a rent in the right side of the uterus anteriorly six inches long, extending from the external os up towards the fundus. The rupture involved all the coats of the organ, the peritoneum being torn for a considerable distance beyond the muscular coat. The patient was a multipara, and the rupture appeared to have been caused by unsuccessful attempts at version in a shoulder presentation.

Dr. Douglas Stanley shewed two cases of Aneurism.

Case 1. A man, age 34, was brought in dead, having fallen down suddenly. There was no hæmoptysis or other external appearance of hæmorrhage. *Post mortem* an aneurysmal sac was found occupying the arch of the aorta and embedded in the apex of the left lung. A distinct orifice about the size of a shilling piece was found between the aorta and the sac. There had been rupture through the lung tissue into the left pleural cavity. The other organs shewed evidence of syphilis.

Case 2. A man, aged 48, was admitted complaining of pain in the precordial region, and shortness of breath. The history shewed that he had been frequently exposed to severe wettings. In the early part of last year he complained of great weakness and pain, which he attributed to his having lifted a heavy box. On physical examination, the cardiac impulse was found to be

feeble, but was best marked in the sixth left interspace, three-quarters of an inch external to the vertical nipple line. There was general increase of the precordial dullness, but on auscultation, no murmurs could be heard, both sounds being weak.

Post mortem an aneurism, about the size of an orange, was found situate in the left ventricular wall close to the septum. The wall of the sac was formed by endocardium, some fibrous tissue, epicardium, and parietal pericardium, this latter being adherent to the epicardium. In the interior was some laminated blood-clot.

Mr. Jordan Lloyd read a paper on "Appendicitis."

The fifth ordinary meeting of this society was held on Wednesday evening, February 7th, the President, Dr. A. H. EVANS, being in the chair.

Ovarian Cyst.—Dr. Purslow shewed an ovarian cyst with twisted pedicle.

The patient, who was 33 years of age and had had six children, was admitted complaining of a swelling in the abdomen. She had had an attack of pain in the abdomen, and vomiting, lasting two days, one month before admission, but no other symptoms.

On examination, there was a tumour reaching up to the level of umbilicus, principally on right side of median line. On vaginal examination, a swelling could be felt on the left side and in front of uterus, the latter being retroverted.

Operation.—The cyst found to grow from the left ovary to be multilocular, and to have undergone rotation from left to right anteriorly through one and a half circles. The lower and right side of the tumour was greenish black in colour; the contained fluid was of the colour of porter, and there were extensive adhesions.

The patient made an uninterrupted recovery.

Double Intussusception.—Dr. J. W. Russell shewed a specimen of a double intussusception. The first invagination was of the

ileo-colic variety, and presented a sloughing apex; the second had occurred in the ileum, about two inches above the former, which it had nearly overtaken. The condition of the patient, a child aged 9 months, had not admitted operation.

Renal Calculus.—Mr. George Heaton shewed a large branched renal calculus. The patient, a woman aged 33, had suffered from suppurative pyelitis for many years, and died of suppression of urine.

Post mortem both kidneys were found dilated and in an advanced stage of calculous pyelitis. The dilated pelvis of each kidney was filled with a large renal calculus blocking up the orifice of the ureter and sending processes into the kidney calyces.

The specimen shewn was removed from the right kidney. The main calculus weighed two ounces, and consisted of uric acid covered on its exterior by a thick crystalline deposit of calcium carbonate. There were a number of smaller calculi in the calyces of the kidney, and the large calculus shewed a number of well-marked fonts where these smaller ones had rubbed against it.

Dermoid Cyst.—Mr. Christopher Martin shewed a dermoid cyst removed from the cæcal region. The patient was 38 years of age, married, and had had four children, the last seven months before the operation. Eleven years ago she first noticed, below and to the left of the umbilicus, a painless hard lump the size of a hen's egg. After her first confinement, seven years ago, it was found to the right of and below the umbilicus. She became subject to repeated attacks of agonising colicky pain, sudden in onset and lasting for hours, and accompanied by violent vomiting and prostration. These seizures were more severe and frequent during her pregnancies. The last occurred twelve days before operation.

On examination, a globular, elastic, cystic mass, as large as a cocoa nut, was found in the right lower abdomen. It was remarkably mobile, and could be pushed backwards into the right loin, downwards into the pelvis, and over to the left of

the middle line. Per vaginam, the uterus was normal, and had apparently no connection with the growth.

In July, 1893, Mr. Martin opened the abdomen and removed the tumour, which proved to be a dermoid cyst containing fat, hair, bone, and teeth. It was apparently growing from the cæcum, the pedicle (which was twisted thrice from left to right) being formed by the enlarged vermiform appendix and its mesentery. The blood vessels of the growth were entirely derived from those of the appendix and cæcum. The only connection it had with the uterus was by a long fibrous cord, which passed to the right corner of the uterus and proved to be an attenuated twisted Fallopian tube.

Undoubtedly the tumour was originally an ovarian dermoid with a long pedicle, and the attacks of pain were due to repeated axial rotation of the growth. It had almost entirely twisted itself off the broad ligament, having previously become adherent to the vermiform appendix. The patient made an uninterrupted recovery and has since remained in perfect health.

Dr. Donovan read a paper on Puerperal Septicæmia.

REVIEWS.

PYOGENIC INFECTIVE DISEASES OF THE BRAIN AND SPINAL CORD, MENINGITIS, ABSCESS OF BRAIN, AND INFECTIVE SINUS THROMBOSIS.*

THE admirable work already published by Dr. Macewen on the subjects dealt with in his present book made us anxious to become acquainted with his recent matured views, and assuredly we are not disappointed in the result. Much has been written during the last few years on cerebral abscess, meningitis, and

* Pyogenic Infective Diseases of the Brain and Spinal Cord. Meningitis, Abscess of Brain, and Infective Sinus Thrombosis. By William Macewen, M.D. Glasgow: James Maclehose and Sons.

sinus thrombosis, and what was needed was a review of these subjects which should, so to speak, crystallise them and give definite shape to the views on the anatomy of the parts concerned, the pathology of the diseases, and their treatment. This the author has done in an admirable manner, and though his book is only a recitation of his own personal views, other people's work being scarcely alluded to, his experience has been so great that we hardly regret that this work is in no sense a compilation.

Chapter 1, of 50 pages, deals with the anatomy of the temporal bone and the relations of the cerebrum and cerebellum to it, the nerves passing through it, position of the sigmoid groove, etc. A short description is also given of the frontal sinuses, and we have a full account of the venous supply of the head, external and internal, and of the cerebral membranes. The feature of the anatomical part is that it teaches "applied" anatomy rather than systematic and transcendental anatomy. The description of parts is however at the same time quite minute, and we commend it to the attention of those who are foolish enough to imagine that anatomical studies can be too much insisted upon or can be carried to too great minuteness.

In describing the mastoid antrum, upon which so much turns in the treatment of middle ear disease and its complications, the great anatomical feature insisted upon is the supra-meatal triangle. This is bounded above by the posterior root of the zygoma, in front by the squamous portion of the arch of the ext. auditory meatus, and behind by a base line joining these two. This little triangle is to be found well marked in 94 per cent. of skulls of all kinds; it is exposed by an incision behind the external ear close to it, and through this the antral cavity can always safely and with certainty be opened if it exists.

The Second Chapter is devoted to the Pathology of the infective diseases, and the first point demonstrated is the common origin of the various conditions, pachy-meningitis, leptomeningitis, brain abscess, etc., in various pathogenic and sephytic organisms. The paths by which these infective processes extend from one tissue to another are traced out and the various

injuries and pathological conditions leading to intra-cranial disease are described with clinical notes illustrating each. The main interest of this chapter centres in that part of it which deals with inflammation of the middle ear extending to the intra-cranial structures. It is clear that invasion takes place in one of two definite directions, either through the roof of the mastoid and tympanic cavities, that is through the tegmen, or through the mastoid groove; the one involving the structures in the middle fossa and the cerebrum, the other the posterior fossa and the cerebellum. The conditions resulting may be either pachy-meningitis, or in addition, perforation of the dura and lepto-meningitis, circumscribed or diffused, or invasion of the sigmoid sinus with thrombosis of it, the thrombus possibly disintegrating and giving rise to systemic infection. Associated with one or more of these lesions, or arising alone and uncomplicated with either of them, brain abscess may be found. The varying fate of brain abscess receives full attention and illustration by cases. It has numerous possibilities, quiescence for a time with subsequent rapid extension, rupture into the sub-dural space or into the ventricles, and even discharge externally through the damaged bony structures. The abscess may contain large sloughs of brain tissue, a fact which operators should bear in mind, for if not evacuated these necrotic masses are full of evil consequences for the patient. A little space is devoted to the study of the low temperature and the slow pulse generally associated with brain abscess, and tuberculosis and carcinosis of the middle ear also receive special attention.

Chapter 3 deals with the symptoms of abscess of the brain and meningitis, and here again we have appeals to numerous full and accurately-described cases to elucidate the various stages of these diseases and the phenomena they present. The summing up, at the end of the chapter, of the differential diagnosis between encephalitis and cerebral abscess, between diffuse lepto-meningitis and cerebral abscess, between infective sigmoid thrombosis and abscess, and between tumour and abscess, is exceedingly well done and clearly expressed.

Chapter 4, on thrombosis of the intra-cranial sinuses, is well worthy of perusal. Although it is mainly a consideration of infective thrombosis, for the sake of completeness a study is also made of that form of thrombosis known as marasmic. It is, however, chiefly to infective sigmoid thrombosis that the attention of surgeons will be directed, owing to the comparative frequency of its occurrence. Here, again, the clinical picture is perfectly drawn, and every point of interest is illustrated by full notes of cases.

Although all the chapters already referred to contain notes of operations and the details of their performance, Chapter 5 is devoted to the systematic consideration of treatment. As it is the extension to the mastoid antrum which dominates most of the infective intra cranial diseases, the indications for opening it and the mode in which this is best carried out are described at length. The instrument favoured by Dr. Macewen for this purpose is the rotatory bur propelled by a surgical engine. This is applied to the supra-meatal triangle already referred to; and numerous important practical points are alluded to in the pages describing the operation, the neglect of which will inflict serious damage on the patient. After the mastoid cavities have been dealt with, any extension from them receives attention. If this be sigmoid sinus thrombosis, the sinus is obliterated, and, if necessary, the internal jugular vein ligatured and divided; but this does not appear to be called for as a routine procedure. Trephining for cerebral abscess and meningitis are the last subjects of the chapter. Finally, we have a summary of Dr. Macewen's results, the statistics presented comprising all the cases he has operated on. When we mention that among them the following are contained, it will be seen that the operator has full reason to be satisfied with the record. Of operations for purulent otitis media, with extension limited to the mastoid antrum and cells, 38 were performed, and all the patients recovered. Of 25 cases of cerebral abscess, 19 were operated upon and 18 recovered. Of 18 cases of sigmoid sinus thrombosis, 17 were operated upon and 13 were cured.

The text is illustrated by 60 figures and drawings, nearly all of which are original, and are very well done ; whilst in addition there are numerous charts of temperature, pulse, and respiration completing the cases described.

We commend this book most heartily to our readers, and we congratulate its author on producing such a valuable addition to surgical literature. If we have a fault to find in it, it is perhaps that it is at times too egotistical in tone ; but something must be forgiven to one who has acted as a pioneer.

INFECTIOUS DISEASES.*

THIS is a handy and unpretending little manual dealing with all that is necessary to be known about the legal bearing and the diagnosis of infectious diseases.

The first part, which comprises more than half the book, is devoted to an exhaustive collection of the statutes relating to infectious diseases in force not only in the country generally, but also in the metropolis. To those sections which require explanation, Dr. Parkes has appended a few words of comment or elucidation derived from the experience of the law and its workings. These comments are just what is required for the understanding of the Acts quoted, and only in one place does there appear to be any doubt as to the rendering of the clauses quoted. Application for a justice's order to remove a patient "without proper lodging or accommodation" need not be made to a court, but to any justice ; and as it has been held that a court has no power to go behind the certificate of a medical man, it is one which should be given with all due caution, in view of subsequent proceedings for obstruction.

The remaining 70 pages are devoted to a brief summary of the leading facts in connection with infectious diseases, and

* *Infectious Diseases.* By Louis C. Parkes, M.D., Medical Officer of Health for Chelsea. London : H. K. Lewis.

include a tabular statement of the incubation, sources of infection, infective period, etc., of the various diseases affected by the Acts. Dr. Parkes makes here no mention of erysipelas, which may be regarded as the *bête noir* of the M.O.H., and the inclusion of which in the diseases scheduled is now more and more condemned. A valuable essay upon infectious diseases in schools is followed by a few remarks on isolation at home and some plain directions for disinfection.

The book concludes with some remarks on the relation of the M.O.H. to the medical practitioners of his district. This is a most important subject, especially where the M.O.H. is in private practice; but we cordially endorse the advice given by Dr. Parkes for the avoidance of friction. Much must of necessity depend upon the *personnel* and the discretion of the Medical Officer in working Acts where the privacy of the sick room is invaded.

We can heartily recommend the book to all medical men who desire to acquaint themselves with the present law and treatment of infectious diseases from a sanitary standpoint.

SYLLABUS OF LECTURES ON THE PRACTICE OF SURGERY.*

THIS little work is published by the author as an aid to the lecturer in surgery and to the student in preparation for his final examination. It is little more than a condensed abstract of the American Text-book of Surgery, and so can scarcely be viewed on its own merits. We must confess that we have no great liking for these extremely condensed and tabulated text-books, and venture to think that both lecturer and student do wisely, as a rule, in making their own abstracts from the large works rather than accepting any ready-made one. Still the work serves the purpose for which it is intended by the author.

* Syllabus of Lectures on the Practice of Surgery. By N. Senn, M.D., LL.D., Chicago. Philadelphia: W. B. Saunders.

We much question the advisability of the very free use which is made in the book of surgeons' names in connection with each new process and method. It adds to the difficulties of the student, and serves no useful purpose. Many instances might be quoted, but the following are instances gathered at random. "Fat embolism"—Flournoy, Busch, Wagner, Rudel, Virchow; "Osteoplastic resection of ankle"—Wladimiroff-Mikuliez; "Fluhrer's aluminium gravity probe;" "Stiles' test," etc.

We notice in the anatomical description of the male urethra the lengths of the spongy and prostatic portions are given as 9 in. and $\frac{1}{2}$ - $\frac{3}{4}$ in. respectively. These measurements do not agree with those usually accepted in England.

RETIREMENT OF DR. W. H. DICKINSON.

DR. GERARD CARRÉ sends us the following notice, with a request for its publication :—

H.R.H. the Duke of Cambridge has accepted the presidency of a Committee which has been formed to present a testimonial to Dr. W. H. Dickinson on his retirement from the office of Senior Physician to St. George's Hospital, of which His Royal Highness is a Vice-President. Among the members of the committee are the Duke of Westminster, the Earl of Cork and Orrery, Mr. Shaw Stewart, and Colonel Haygarth, Vice-Presidents of the Hospital. Mr. J. R. Mosse, Treasurer; Sir Henry Acland, Admirals Sir George Willes and Sir W. Houston Stewart, Sir George Humphry, Sir Francis Laking, Surg.-Gen. Cornish, and a number of Dr. Dickinson's past and present colleagues and pupils, and former students of the St. George's Medical School.

PUBLISHERS' DEPARTMENT.

New Inventions, Drugs, etc.

MESSRS. BURROUGHS AND WELLCOME send us two very admirable ophthalmic appliances. The Chromatic Dial, designed by Dr. Ward Cousins, consists of two equal and concentrically placed discs of cardboard, the uppermost of which revolves round a central axis. In this disc are four perforations placed at equal intervals from one another, around each of which is painted one of the colours red, pink, or green (two shades) respectively. On the undermost disc are twenty-four varieties and shades of colour, arranged in such a manner that each in its turn can be brought beneath each of the perforations in succession as the uppermost disc is rotated. By this means a rapid and extremely convenient method is provided of testing a patient's power of matching colours, and therefore the acuity of his colour vision. It will be seen that the apparatus is designed only to detect the common—*i.e.*, the red and green—forms of colour blindness; but the comparative rarity of the other varieties renders this a point of but slight importance. Accompanying the dial are a stand, on which it may be fixed, and a set of test-types, which fold up and can be carried in a pocket inserted in the stand.—The Ophthalmic Case is a small pocket-case containing nine tubes of "ophthalmic tabloids." These tabloids are "minute discs of the thickness of note-paper," "very soluble, and prepared with a perfectly sterile, innocuous, and non-irritating basis." Of their very rapid solubility when moistened with water we can speak from our own experience. In the case are also a small glass, in which the discs can (if desired) be dissolved in water before use, and an ingenious appliance for easily and painlessly placing the solid tabloids within the conjunctival sac. The small size of the case and the variety of the drugs contained in it render it, we think, a very valuable and convenient piece of apparatus for those engaged in ophthalmic work,

New Books, etc., Received.

- Trephining in its Ancient and Modern Aspect. By JOHN FLETCHER HORNE, M.D., B.Sc. (Hon.), F.R.C.S., Ed., Honorary Surgeon to the Barnsley Beckett Hospital. London: John Bale and Sons. 1894.
- Atlas of Clinical Medicine. Vol. ii., part iii. By BYRON BRAMWELL, M.D., F.R.C.P. Edin., F.R.S. Edin.; Assistant Physician to the Edinburgh Royal Infirmary. Edinburgh: Printed by T. and A. Constable at the University Press. 1893.
- Notes on Nursing in Eye Diseases. By C. S. JEAFFRESON, M.D., F.R.C.S.E.; Senior Surgeon to the Northumberland, Durham, and Newcastle Infirmary for Diseases of the Eye. Bristol: John Wright and Co. 1894.
- The Year-book of Treatment for 1894. Cassell and Co. Lim. 1894.
- Two Great Scotsmen: The Brothers William and John Hunter. By GEORGE R. MATHER, M.D., F.F.P.S.G. Glasgow: James Maclehose and Sons. 1893.
- The Effects of the Iodides on Arterial Tension and the Excretion of Urates. By A. HAIG, M.D. Oxon., F.R.C.P. London: Adlard and Son. 1894.
- The Nurse's Dictionary of Medical Terms and Nursing Treatment. Second edition. By HONNOR MORTEN. London: The Scientific Press Lim.
- Sprains, their Consequences and Treatment. By C. W. MANSELL MOULLIN, M.A., M.D. Oxon., F.R.C.S.; Surgeon and Lecturer on Physiology at the London Hospital. Second edition. London: H. K. Lewis. 1894.

* * * Authors can have reprints of articles at the following rates :—

Not exceeding 8 pages	...	8/-	per 100
„ 16 „	...	12/6	„

The re-arranging of the type is the principal cost in the production of these reprints, so that smaller numbers will be the same price. Larger numbers at a proportionate reduction.

The Subscription (prepaid) to the *Birmingham Medical Review* is 6s. per annum, post free.

NOTICE.—All Communications should be addressed to the Printers and Publishers, Messrs. Hall and English, 71, High Street, Birmingham.

THE
BIRMINGHAM MEDICAL REVIEW.
APRIL, 1894.

ORIGINAL COMMUNICATIONS.

THE INGLEBY LECTURES, 1894.*

ON THE COMMON FORMS OF DYSPEPSIA
IN WOMEN.

BY ROBERT SAUNDBY, M.D. EDIN., F.R.C.P. LOND.
PROFESSOR OF MEDICINE, MASON COLLEGE.
PHYSICIAN TO THE BIRMINGHAM GENERAL HOSPITAL.

LECTURE I.

Gentlemen,

It is my first duty to tender my thanks to the Council of this College for electing me to deliver the Ingleby Lectures for the present year, and I do so most sincerely.

These lectures serve, in the first place, to recall to us the memory of Dr. Ingleby, one of the ablest and best of the former teachers in this medical school, and one of the most eminent among many eminent men who have practised the art of medicine in this city. In the second place, they afford an opportunity for giving a little of what it is the fashion to call "post-graduate" instruction; that is, teaching of a more advanced kind, specially adapted to the requirements of practice. In the choice of a subject, I felt somewhat hampered by the necessity of confining myself to diseases in their relations to women or children; and in thinking over this limitation, those

* Delivered at Mason College, March 15th and 22nd, 1894.

who have done much out-patient work will understand how naturally my mind turned to the well-known type of dyspeptic woman which constitutes two-thirds of the adult female patients in our hospital out-patient medical departments, and must form a considerable part of the daily work of every general practitioner. She is the principal object of stock mixtures and routine treatment, and is passed hurriedly by to gain time for the investigation of cases presenting more obvious signs of definite organic disease. I confess that in the days when I was an over-worked labourer in the out-patient department, I was too much borne down by her numbers to regard her with much favour; but I remember, as one of my first practical experiences, that her dyspepsia was not to be remedied by the drugs which I had learnt from books were the appropriate means for that ill-defined condition—that neither bismuth, nor rhubarb and soda, nor vegetable bitters allayed the pangs of which she made such voluble complaint; while a little later, I believed that nux vomica or strychnia with mineral acids or sometimes the tincture of the perchloride of iron, combined with the use of an aperient, satisfied at least the majority of her class; and having established that somewhat superficial induction, I was contented to prescribe for her in a stereotyped fashion with comparatively satisfactory results.

These stomach troubles originate almost invariably as a neurosis dependent upon debility from anæmia or over-work. The nervous defect shews itself most commonly, or in the first and simplest form, by depressing the motor functions of the stomach and intestine; secondly, by increasing the sensitiveness of the gastric mucous membrane; and thirdly, by diminishing its secretion.

But a condition that starts as a pure neurosis is apt to become more complex as time goes on; a pure motor defect causes delayed digestion, dilatation, fermentation, pain, flatulence, eructation, vomiting, and gastritis. The simpler cases, in whom there is merely atony, with some pain and flatulence as its symptoms, make up the great bulk of the out-patient class;

but the in-patients present more serious features, of which vomiting is the most constant, due either to gastritis or to hyperæsthesia of the stomach.

I can fully confirm Leube's observation of the particularly frequent association of gastralgia with anæmia or chlorosis, and I have in several published lectures insisted on the importance of the diagnosis of these cases from those of ulcer of the stomach which they so closely resemble.

Hyperæsthesia of the stomach, existing in only a moderate degree, so as to cause pain after food, is often the cause of very serious derangement of health, as it does not yield to routine treatment—rhubarb and soda, bismuth, and the like—and one article of diet after another is in turn given up as causing pain, until the amount of nourishment taken becomes very insufficient, and the initial cause, anæmia, is greatly aggravated, the patient loses flesh, gets very weak, and at last has to take to her bed. In bed her condition is more favourable to recovery; but death may result from want of proper treatment, as I have known in at least three cases. Had these patients been put to bed early and treated rationally, their lives could have been saved.

I suppose most of my hearers have been able to follow me and to assent to this description. These cases have been observed more or less fully by several writers, but with too much disposition to ascribe them to some particular cause. Thus one writer finds them due to excessive tea-drinking, another regards them as merely neurotic, and others as of reflex uterine origin, etc.

I do not share the opinion of those who see in excessive tea-drinking a common or efficient cause of any considerable number of dyspeptics in the class to which I am referring. I believe that tea will most undoubtedly irritate a stomach in a state of sub-acute inflammation, and therefore it is possible that its prolonged and excessive use, especially on an empty stomach, may set up some gastritis. But, as a rule, these women do not suffer from gastritis, and are not benefited by giving up tea and taking

gastric sedatives such as would relieve inflammatory irritation. It may be said that tea predisposes to nervous ailments, but I do not think there is any real evidence of this. These women are suffering from over-work and anæmia, and the teapot is a comparatively harmless means by which they are enabled to go on at all.

METHODS.

Because Czerny's dog lived some years without a stomach and was no worse for the absence of that organ, a certain school of physiologists has of late years, attempted to deny its importance, and maintains that it is only a useless survival in man of a vegetarian stage in his existence. Although we may allow that there are powerful supplementary digestive agencies in the intestine which can and do make up for failure on the part of the stomach to perform its duties, and although we may admit, for the sake of argument, that if we had no stomachs we might digest and assimilate nutriment in sufficient quantities for the purposes of existence, we know, as pathologists, that derangements of the stomach are attended by inconveniences which depend perhaps rather on their secondary results than on the direct failure of digestion, and it is these secondary results which constitute the basis of the clinical phenomena of what we somewhat vaguely term dyspepsia.

A very great step has been made towards the clear understanding of stomach disorders in the method introduced by Küssmaul of examining the contents of the stomach during digestion, or a given time after the ingestion of food, by means of the stomach tube. By this and other means recently discovered, we can investigate the size of the stomach, the condition of its muscular wall, the quantity and quality of the gastric juice, and the presence in the stomach of abnormal substances which may injure its glandular mucous membrane, impair its function, and give rise to pain, flatulence, and other troubles.

If we wish to estimate the functional capabilities of an organ, we try to measure the work it does; and if it is a secreting

gland, we obtain some of the secretion and submit it to various chemical and other tests in order to determine its quantitative and qualitative characters. There is no better example of this method than the kidney, which has been the subject of close study for the last sixty years, so that we now possess a vast amount of theoretical and practical knowledge of its function and secretion which is put to daily use by every one of us. It would not seem unreasonable to expect that a similar line of study if directed to the stomach, its functions and secretions, would lead to equally definite and perhaps equally valuable results; and the only reasons that I know which have hindered this investigation have been the inherent conservatism of our professional methods, and an exaggerated notion of the difficulty of carrying out such examinations.

The stomach is a hollow muscular organ, lined with a mucous membrane which may be regarded as a very large compound gland, pouring into the cavity a mixed complex secretion of very great importance called the gastric juice. This secretion is formed under the stimulus of any ingesta which reach the stomach, and its main purpose is to act upon and convert the native albumens more or less coagulated by cooking—which form such an important part of our food—into soluble albumoses and peptone. The function of the muscular wall is to mix and circulate the gastric juice with the food and, after a lapse of time, to expel the contents of the stomach into the intestine. We do not know the mechanism which regulates the opening of the pylorus or outlet by which the stomach communicates with the bowel, but we do know that the discharge of the contents at the proper time depends upon the integrity of the muscular portion of the stomach wall. We also know that the conversion of native albumen into peptone depends upon the action of pepsin in the presence of free hydrochloric acid, and that in the absence of either of these essential elements of digestion, the proper conversion of food in the stomach does not take place. Therefore the problems we set ourselves to solve in a given case where

there is dyspepsia—that is, where the function of digestion is slow and painful, attended with the evolution of gases abnormal in quantity or quality, or by signs of irritation of the mucous membrane of the stomach;—the problems, I repeat, we set ourselves to solve are: Is the muscular wall active, and capable of discharging the stomach contents in due time? are pepsin and free hydrochloric acid present in sufficient quantities, and does the gastric juice possess its normal power?

The answers to these questions may be obtained by following a course of procedure which is so simple that every member of the medical profession possesses sufficient chemical knowledge and technical skill to conduct any part of it.

ATONY AND DILATATION.

The motor functions of the stomach may be determined by a series of observations upon the length of time after a meal of determined nature at which a distinct residuum of food could be extracted from the stomach by means of a tube or an emetic. But although this has been done, a more convenient method has been devised, which depends upon two facts—1, that the normal stomach contents are acid, but become alkaline after being mixed with bile in the duodenum; and 2, that salol (a compound of phenol and salicylic acid) breaks up in the presence of alkalis into its component parts, which are excreted in the urine, where their presence may be demonstrated in the usual manner by the perchloride of iron test. The dose is fifteen grains, given about one hour after food, by which time the stomach contents have become distinctly acid. According to the careful observations of Ewald, in from forty minutes to one hour and a quarter, the urine should give the characteristic reaction, which I now shew you, while thirty hours later, there should be none. If the reaction has not appeared in the time first mentioned, or has not disappeared at the end of the time stated, we are justified in inferring that the muscular wall of the stomach is defective in the performance of its function, and if there is no evidence of pyloric obstruction, this must be

due to atony of the muscular wall, a condition which is a very common one, and plays a leading part in the pathology of the cases now under consideration. This condition of atony leads in time to more or less dilatation, which may be demonstrated in various ways. It may be possible to map out the stomach by palpation and percussion when distended by food or fluid, and in the latter case we may elicit a distinct succussion splash. But in less marked cases this is not easy, and the thickness of the abdominal wall may interfere greatly with the precision of our manipulation. Some assistance may be derived by distending the stomach with a spray-producer attached to a stomach-tube introduced into its cavity. This method does not cause pain, and by the altered resonance on percussion gives very fair indications. The old plan of distending the stomach by administering an alkali and an acid separately is not to be recommended, as the carbonic acid gas evolved causes spasmodic closure of the cardiac opening, and great pain and even fainting may result from over-distension. I remember, when I was a resident in the Edinburgh Infirmary, one of my colleagues had occasion to determine the size of a stomach in this way, and the result was so distressing as to make him fear even for the patient's life, so that I have never since allowed it to be practised.

GASTRIC CONTENTS.

The examination of the gastric contents is rather more complex, but is based on even simpler principles. We give the patient—say at 8 a.m.—a breakfast consisting of four ounces of bread and a pint of weak tea without milk or sugar. Numerous observations made by Ewald and Boas have shewn that for the first half or three-quarters of an hour lactic acid preponderates in the contents of the stomach; then distinct traces of hydrochloric acid begin to be present together with lactic acid, and at the end of an hour the lactic acid disappears, and free hydrochloric acid alone is present. Therefore one hour after the administration of the test breakfast the stomach-tube is intro-

duced—such a soft long tube with a large fenestra as I shew you—and the contents of the stomach removed, an operation which is very easy, and is facilitated by voluntary compression of the abdominal muscles by the patient. In this way a few ounces of gastric contents are obtained, which consist of the remains of food mixed with the secretion of the gastric mucous membrane, with saliva, and possibly with a little bile. This material is filtered, and its reaction tested with litmus paper. If alkaline or neutral, it indicates a very abnormal state of the gastric secretion, such as is only met with in a few cases of advanced organic disease. It is as a rule acid, and we have next to determine the nature of the acid present.

The test for lactic acid is made by adding to a one per cent. solution of carbolic acid a few drops of perchloride of iron, as I do now, and diluting this, if necessary, with distilled water until we possess a solution of a pale amethyst colour. On adding a little of the filtered stomach contents, the amethyst blue turns to a canary yellow if lactic acid be present. This reaction is given by lactates as well as by lactic acid, and by other substances, such as alcohol; but under the conditions of our experiment, these fallacies are of no importance. If the solution turn pale yellow with a reddish or brown lustre, butyric acid is present; but this, too, is not important in the case of our test breakfast, though the fact is of value in the examination of vomited matter, for butyric acid is a product of fermentation in the stomach, and is a very powerful irritant of the gastric mucous membrane.

Whether or not lactic acid is present, we have to determine if there be any free hydrochloric acid in the gastric contents—that is, whether the secretion of hydrochloric acid by the peptic glands of the stomach has been sufficient to supply all the chemical affinities present in the food and to leave a surplus, as should be the case in healthy digestion. There are many reagents which have been employed for this purpose, but I invariably make use of Günzberg's test, consisting of two parts of phloroglucin, one part of vanillin, and thirty of absolute

alcohol. If I dip a splinter of wood in this solution, and then touch it with hydrochloric acid, it turns red. If we put a few drops of the solution into a capsule together with a few drops of filtered gastric contents, and warm them gently over a lamp so that the fluid is evaporated, the appearance of streaks and patches of bright red indicates the presence of free hydrochloric acid, and this test is so delicate that it will detect less than 0.05 parts of free hydrochloric acid *per mille*.

Our next business is to determine whether the gastric juice contains a sufficiency of pepsin; and if we have proved that there is a due supply of hydrochloric acid, we must conclude that if pepsin is not absent, peptone should be found in the filtrate. The test for peptone is what is called the biuret reaction, the rose-red colour on adding peptone to Fehling's solution; but of late years it has been shewn that the albumoses, which are a transition stage between albumen and peptone, give this reaction, so that we must first get rid of these by saturating the filtrate with ammonium sulphate, allowing it to stand twenty-four hours, filtering it, and perhaps saturating it again, warming it gently, and again filtering before we have a fluid in which we can with certainty affirm the presence of peptone.

Not very uncommonly it happens that the result of this proceeding in cases of dyspepsia is negative, yet we are not thereby enabled to conclude that pepsin is deficient, unless albumoses also are absent. It becomes necessary to carry our investigation a stage further, by employing our filtered gastric contents as a digestive agent in an artificial digestive experiment. For this purpose we stamp out with a cork borer a number of little discs of white of egg, and place an equal number of these—let us say six—in four test tubes. To the first of these we add only the filtered stomach contents; to the second, the gastric contents *plus* a few drops of 0.2 per cent. hydrochloric acid; to the third, gastric contents and pepsin; to the fourth, no gastric contents, but hydrochloric acid and pepsin. These are all placed in an oven and kept at the tem-

perature of the stomach—100° Fahr.—for three or four hours. At the end of that time they are examined separately for peptone. If the first shews peptone, the gastric juice was active but a little weak ; if the second only or better than the first, that the hydrochloric acid was insufficient ; if the third only or distinctly better, that pepsin was deficient ; while the fourth is the control tube, by which we are enabled to assure ourselves that the hydrochloric and pepsin used, and the other conditions of the experiments, were good and efficient.

We have met with a good many cases of anachlorhydria or deficient secretion of hydrochloric acid, but only one in which pepsin was absent. Hydrochloric acid was as a rule absent in cases of chronic gastritis and dilatation, but in only one where there was no evidence of such organic disease. It is known that the secretion of this acid may fail from nervous causes, and even without giving rise to dyspeptic symptoms, so long as the motor function of the stomach remains normal. The persistence of pepsin in sufficient quantity depends probably upon the small amount actually necessary, and agrees with the results obtained by Leube and others, but is strikingly in opposition to popular pathology, to judge by the large number of people who think themselves benefited by the use of preparations of pepsin.

This work necessarily takes up a good deal of time, and I do not suggest that every busy practitioner can investigate his cases so completely. In the majority of instances it is not necessary to do so ; but I hope before very long it will be as easy to get assistance, where needed, in such investigations as it now is to have microscopical or chemical examinations made of urine, sputa, or morbid growths. All that would be required of the practitioner would be to order the test breakfast, attend to remove it at the proper time, and then seal up the fluid obtained in a bottle and send it for examination and report.

RESULTS.

A great number of experiments have demonstrated that atony of the stomach, involving delay in the transfer of the gastric

contents into the intestine, is the most constant, the earliest, and most important factor in the production of the common dyspepsia of women. A little consideration will shew you how this operates. When the muscular wall of the stomach fails to act properly, it, in the first place, does not mix and churn the food so as to ensure all parts of the mass coming into proper contact with the gastric juice, so that the reduction to chyme is imperfectly performed.

It has been observed in experiments upon artificial digestion that the continuous peptonisation of albumen only occurs if the peptones already formed are removed, as they are formed, by dialysis, so that the accumulation of peptones in the stomach constitutes an obstacle to the further digestion of albuminous matter, and as little or no absorption takes place through the wall of the stomach, any delay in the discharge of gastric contents through the pylorus must be attended by this. It also gives rise to more or less stagnation of the blood and lymph currents, impairing the function of the glands, and leading to insufficient secretion of hydrochloric acid, as we have found in many of our in-patients. The defective movements of the muscular wall also lead to incomplete admixture of the gastric juices with the ingesta. By and by the stomach becomes slightly dilated; a residue of food remains in the stomach until the next meal is taken, and this liquid organic matter, which contains normally many micro-organisms and is deficient in its natural antiseptic, hydrochloric acid, undergoes fermentative decompositions, giving rise to the formation of lactic and butyric acids, which cause irritation of the gastric mucous membrane, discomfort and pain, and are attended by the evolution of gases, which cause flatulence and often smell offensively. A stomach in such a condition is very prone to attacks of subacute gastritis.

This inflammatory reaction is slight at first, but it weakens the resistance of the membrane, renders it more prone to acute or subacute exacerbations, manifested by what are called bilious attacks, and, in course of time, determines atrophy of the

glands of the stomach, with consequent diminution of the gastric juice, and as it extends through the mucous and sub-mucous coats to the muscular layer, further weakens this, leads to increased atony, and some degree of permanent dilatation. When this is established, the vicious circle is completed and all the evils I have enumerated are intensified, and the stomach troubles become very serious.

The initial evil—atony of the wall of the stomach—arises from so many conditions, which, as I told you in the commencement of this lecture, are especially liable to occur in women. From anæmia, from over-work, want of sleep, and anxiety, which are the lot of so many women in the course of the duty of bringing up a family; from super-lactation, want of sufficient food, confinement to the house, and irregular meals; from acute diseases, and want of proper rest, good food, and fresh air during convalescence. Does not the recital of these causes remind one too forcibly of the common lot of most of the women in our great towns; not only the wives of artisans or of the middle class of clerks, warehousemen, and shop assistants, but of the wives of many who are in fairly comfortable circumstances, but on whom sickness makes demands which they are not in a position to meet with all the resources of wealth? I do not think we need wonder that these cases are so deplorably common, and that they continue to get worse instead of better under the persistence of unfavourable conditions and the routine prescription of digestive nostrums.

Simple atony of the stomach due to debility, originating as has been described constitutes the essential and sole lesion in the majority of women suffering from so-called dyspepsia. The symptoms commonly met with are pain between the shoulders, weight at the pit of the stomach coming on some time after taking food, and sometimes relieved temporarily by a meal. Flatulence and constipation are usually present, but the tongue is clean, and the secretions of the mouth are normal. The diagnosis may be made by the administration of a dose of salol, as already described, one hour after food, and the examination of the urine

passed one and a quarter hour after the dose of salol (gr. xv.) has been taken.

The following case is in many respects typical. Janet B., aged 30, housemaid, was admitted into hospital on the 2nd of February complaining of pains in the chest, the left side (hypochondrium), and across the stomach (abdomen). She had been ill three months, and had been attending as an out-patient for five or six weeks without benefit. She began to feel weak and tired in October last. She suffered from a weight at her chest, which was relieved on lying down, and she had no appetite. She attributed these symptoms to over-work, as she considered her place was too hard for her. In December she began to get severe pain in her stomach, which was made worse by the simplest food. She was then obliged to leave her situation. On admission, she appeared sallow, emaciated, with dark rings round her eyes; her tongue was moist and clean; her bowels were regular. Physical examination revealed nothing abnormal. Urine normal. Menstruation regular. The salol test shewed marked delay in the motor function of the stomach, but the test breakfast gave normal results. She was sent out quite well after a fortnight's treatment.

In the following example we have an illustration of a further stage in the pathological descent:—Elizabeth W., 21, a domestic servant, was admitted on January 24th complaining of morning sickness, headache, and shortness of breath. She had been getting ill for five months, but had been worse since Christmas. Her work was very hard, as she was on her legs nearly all day. It really seems that next to the careworn house-mother herself the general servant is the hardest worked mortal in our social system, and suffers most from these consequences of over-work.

On admission she looked sallow and ill-nourished, but she was not thin. Her teeth were good; tongue clean; appetite bad; she complained of weight and burning pain in the pit of the stomach, going through to the back, which came on directly after food; there were flatulence and sour eructations; the bowels were confined; she vomited both before and after break-

fast. Dilatation of the stomach could be made out by distension and percussion, and the salol test shewed motor defect; the chemical functions were normal.

Menstruation was regular, painful, and of late had been scanty.

Blood: Red blood corpuscles 79 per cent.. Hæmoglobin 46 per cent.

In fourteen days she left the hospital, being able to take ordinary food without any discomfort, and having lost all her symptoms. She was ordered to continue taking iron as an out-patient.

In this case the dilatation was of longer duration and some gastritis had ensued.

A bilious attack is sub-acute gastric catarrh, but it is remarkable how little the subjective symptoms indicate the severe disturbance of the stomach, hence, I suppose, the general unwillingness to recognise the true nature of the lesion. This is very well illustrated by one of Beaumont's classical observations upon Alexis St. Martin. St. Martin had been drinking ardent spirits pretty freely for eight or nine days past; two days later he had an uneasy sensation with tenderness at the pit of the stomach, some vertigo, and dimness and yellowness of vision on stooping down and rising again; he had a thin yellowish brown coat on his tongue, and his countenance was rather sallow, but he felt otherwise well, his appetite was good, and he slept as usual. Now mark the state of his stomach, as described from direct inspection: the inner surface of the stomach shewed extensive erythematous livid patches from the surface of which exuded small drops of grumous blood, large and numerous aphthous ulcers, the whole covered with thick mucus. The gastric fluids when extracted were mixed with a large proportion of thick ropy mucus and considerable mucopurulent matter, slightly tinged with blood, resembling the discharge from the bowels in some cases of chronic dysentery—yet with a stomach in this state he would have eaten anything! It is easy to understand that once the patient has arrived at this stage it is only a question of time before the gastritis becomes chronic and the dilatation permanent and pronounced.

Where the nervous trouble produces marked hyperæsthesia, especially common in anæmic girls, the symptoms are pain immediately after food, epigastric in position, sharp in character, followed and relieved by vomiting; and these cases, as already mentioned, are very liable to be mistaken for ulcer of the stomach. It is noteworthy that the chemical and motor functions of the stomach do not necessarily suffer even in most severe cases of chlorotic anæmia—a fact which we have recently had several opportunities of demonstrating.

This case may be taken as a type of the hyperæsthetic stomach:—Maud P., aged 19, laundress, was admitted into hospital on October 26th, 1893, complaining of pain after food, persistent vomiting, which came on five or ten minutes after eating anything, and shortness of breath. She had been ill for three months, but she had a similar attack seven years ago, and at intervals since, most commonly at her menstrual periods. There was a hæmic murmur in the vessels of the neck; the red blood corpuscles were 80 per cent. but the hæmoglobin only 20 per cent. The mobility and chemistry of the stomach were normal. She recovered rapidly under treatment, and was discharged cured on December 3rd.

Closely allied to anæmic gastralgia is the condition which has been called *anorexia nervosa*, where there is entire loss of appetite for food, generally induced by the pain which has followed its ingestion. In this state the patient becomes extremely wasted, and may die from inanition. In most instances they recover rapidly when put to bed and properly fed; but they are apt to relapse, especially where there is a hysterical element in the case.

Louisa L., aged 21, was admitted into hospital on July 13th, 1893, complaining of inability to eat and weakness. She had been ill six months. On admission, she was pale, and weighed only 6 st. 1½ lbs., T. 98, P. 108, R. 30. She vomited occasionally, and her bowels were confined. She was treated by *mistura magnesiæ sulphatis cum ferro* and Blaud's pills. On September 11th she went to Rhyl weighing 8 st.

Ulcer of the stomach is undoubtedly a common occurrence in anæmic young women, but it has such a well-known pathological and clinical history that I need only allude to it here and elsewhere for the purposes of contrast and comparison. Undoubtedly until hæmatemesis has occurred it is impossible to differentiate ulcer from anæmic gastralgia, but this is no disadvantage, as both should be treated in precisely the same way.

I propose to devote our next meeting to a careful consideration of the methods of treatment most useful for these cases.

MENTAL DISORDER AS A SYMPTOM IN DISEASES OF THE NERVOUS SYSTEM.*

BY J. PIETERSEN, L.R.C.P., M.R.C.S.
MEDICAL SUPERINTENDENT, ASHWOOD HOUSE ASYLUM.

THE explanation of the actual pathological changes which occur during idiopathic and sequential insanity rests at present simply on unsatisfactory hypothetical assumptions, and so long as no attempt is made to classify the mental results of known nervous lesions and functional nervous disorders so long will the essential pathological nature of insanity remain a matter of pure conjecture. So far as I can find this systematic consideration of the association between mental disorder and nervous disease has not yet been attempted; the facts here enumerated are to be found scattered through a multitude of text books and articles and may be considered as reliable, being the records of numerous competent observers in this branch of neurology. Though we shall perhaps never be able accurately to explain the real pathological change which occurs during idiopathic insanity a sounder theory

* Read at the Birmingham and Midland Counties Branch of the British Medical Association, on Thursday, February 8th, 1894.

of its nature than one based on pure hypothesis may certainly be framed when we learn that definite cerebral lesions or disturbances are followed by definite psychical effects.

It may be well also to premise that the mental symptoms here given are such as are fairly uniform in their occurrence, they are not isolated instances of such disturbances, and they may without doubt be taken to be the higher functional disorders which arise as a direct consequence of nerve implication. The mere association with nervous disease of insanity plainly due to other causes is not here included, nor is the onset of somatic nervous phenomena in the course of insanity dealt with, for these would naturally falsify any deductions we may later on wish to draw.

As the direct result of meningitis, from whatever cause, we have, as a mental phenomenon, delirium. Delirium, as ordinarily understood, is any deviation of the mental faculties symptomatic of and dependent on febrile conditions, and therefore quite distinct from mania, the distinction being, however, only a causal one. In this temporary disturbance of the intellect, moreover, we may see presented to us every feature of insanity. Thus, in one case there may be great excitement; in another the symptoms are rather those of dementia; and in a third, those of melancholia. Antecedent, however, to the onset of the delirium, there is a condition of hebetude, dulness, and inactivity which gradually merges into a stuporous state. This is the outcome of an obliteration of action of the highest nerve centres, the ensuing delirium being the expression of the uncontrolled action of the next range of centres, which have lost the exercising control of the highest set. In acute meningitis the delirium may be either slight and quiet, or violent and active, arising usually as an early symptom, though not at the onset of the disease. In tubercular meningitis there are various mental prodromata, such as mental irritability, frontal headache dependent on mental effort, nocturnal restlessness, and visual hallucinations during the day in children. In those rare cases where tubercular meningitis affects only the cerebral dome, cranial nerve disturbance is necessarily absent, and headache and

delirium are the chief signs. In the adult the delirium usually occurs earlier than in children, and in young men and women of neurotic instability the early stage is at times associated with symptoms of a hysteric character. Chronic meningitis in children is an attributed cause of idiocy, known under the generic title of inflammatory idiocy, accompanied in some cases, where syphilis is the cause, with cerebral atrophy. Such meningeal inflammation, whatever its cause may be, occurring before birth or coming on directly after, will cause cerebral hemiatrophy. (F. Beach, Wilks, Gowers, Clouston.)

Chronic meningitis in the adult shews variation in its symptoms according to its causation. In chronic alcoholic meningitis affecting chiefly the cerebral convexity, the chief symptoms are mental failure, headache, delirium, and optic neuritis. This condition runs a chronic course, concurrent with other alcoholic effects on the organism. Chronic syphilitic meningitis in the adult is generally local, usually in the vicinity of a syphiloma; but it may exist apart from this as a diffuse thickening of the pia arachnoid. Focal symptoms are said to be the only consequence; but I have a case on record of acute melancholia arising in a syphilitic subject, drifting into dementia and ending in death, in which no lesion but such localised meningeal inflammation could be discovered. (Gowers, Savage.)

General cerebral anæmia, when of gradual onset, may induce, first, slowness of thought and mental inaction, feebleness of expression, and a lack in conscious force and vividness, the patient's mental state being one of apathy and dulness; then, later, there ensue more pronounced mental obtuseness, hallucinations of sight and hearing, or simple melancholia, or melancholia with delusions of suspicion. Such mental symptoms are found in chlorosis, in the anæmic insanity of over-lactation, and also as one of the marked signs of phthisical insanity. Delirium, whether the result of hæmorrhage, Bright's disease, or occurring in the impoverished state of delirium tremens and in old inebriates, is an expression of an anæmic brain. In the child, long-continued cerebral anæmia may induce lasting damage to

the cerebral nutrition, resulting in arrest of brain development. In the aged, arterial atheroma and enfeebled cardiac action induce the cerebral anæmia of senility, which brings about the loss of memory and general mental power, coupled with suspicion—delusions and illusions of sight, which we designate senile dementia. In rapid cerebral anæmia we may have an outbreak of mania, and in death from starvation a maniacal delirium usually occurs before the close. (Clouston, Mercier, Gowers, Wilks.)

In active cerebral hyperæmia there may be transient symptoms of mental excitability and irritability without actual delusions. Fletcher Beach describes a rare form of idiocy due, so far as can be ascertained *post mortem*, solely to chronic hyperæmia of the cerebrum.

As an after effect of cerebral apoplexy some mental defects are often present. These range from a degree scarcely if at all appreciable and of very brief duration to profound and lasting impairment of the mental faculties; some of them occur within a short time of the attack, others, though directly related to it, do not assume their distinct and definite form till a later period. In such as immediately follow the seizure the patient may even before the restoration of consciousness lapse into a state of delirium of an active type with ideal incoherence and extreme restlessness; this form may end fatally in a few days; it is probably the outcome of an inflammatory action around the lesion inducing grave vascular and consequently nervous disturbance. In other cases in the same category these mental symptoms subside as the physical state improves, and may assume a chronic form and induce a greater or less degree of mental enfeeblement.

In those cases in which the mental symptoms do not appear until some time after the apoplectic seizure there may be either active mental disturbance or simple loss of mental balance. In the former any of the leading forms of insanity may occur—mania is the most common development, characterised by noisy excitement, incoherence of speech, sensory hallucinations and

illusions, destructiveness, and filthy habits. Such maniacal attacks may not last more than two or three weeks, but in some cases they are of longer duration, may become recurrent or intermit with melancholia, approximating the condition to that of *folie circulaire*, and like it may be persistent. Occasionally melancholia only, with or without suicidal tendencies, may be maintained throughout the entire attack. These pronounced mental symptoms may supervene on the apoplexy within a few days, or a considerable range of apparently rational time may intervene. Some cases again shew a gradual development of mental obliquity, due apparently to a slowly increasing thrombic softening, or a gradual extension of cerebral disturbance secondary to the primary lesion. Severe apoplectic seizures may be followed by persistent delusional insanity or by progressive dementia with emotional weakness and short sharp excitable accessions. Those cases which do not shew any active mental disturbance may develop certain mental defects as the consequence of the permanent injury to the cerebral structures; such shew impairment of memory. emotional weakness and defect of judgment; a considerable proportion, especially the aged, evince a permanent progressive mental deterioration. In younger cases recovery may ensue and this may or may not be permanent according to the nature of the cause inducing the apoplexy.

Where aphasia and its allied states result from an apoplectic seizure the mental condition shews some variation in the amount of implication. In simple uncomplicated motor aphasia affecting both speech and writing there is abundant evidence to shew that there is present a fair degree of intelligence and little if any defect in judgment. In the great majority of these cases, however, there is some loss of mental vigour and decision of character, and in proportion to the degree that motor intuitions have been habitual as thought processes, so will the lesion in this form of the disorder exert a corresponding disturbing influence on the reasoning faculty. In pure cases of aphemia or agraphia there ought to be even less interference with mental action, as only one of the channels for the expression of language is blocked.

CHICAGO,
1893.

Highest Award.

MEDAL
AND
DIPLOMA.

“Viroi.”

POSITIVE
SUBSTITUTE
for
COD LIVER OIL.

FORMULA.

“Viroi” simply consists of beef marrow fat from marrow bones which are sawn in sections and the marrow scooped out. The marrow, when separated, is dissolved at a very low temperature, and afterwards combined with raw eggs, the shells of which are also brought into the preparation by the aid of lemon juice. To this is added the carbohydrate in the form of malt extract. So that the fats (marrow and eggs), the proteids (egg albumin), and carbohy-
drate (extract of malt) are arranged in proportions carefully calculated on modern physiological and dietetic data. That the emulsion is a very perfect one is shown by the appended microphotograph, all under power 250.

British Medical Journal, Jan. 13th, 1894.

ANALYSIS.

(CAFFYN'S MALTO-CARNIS.)

“The title sufficiently describes this preparation, and our examination confirms the description.

FORMULA.

R. Liquor Carnis (Caffyn)	... 66 parts
Cocoa Essence (Cadbury)	... 10 ”
Ext. Malt	... 24 ”
Misce	sec. art.

ANALYSIS by “The Lancet” Chemists:

“Analysis showed—mineral matter, 3.50 per cent. (rich in soluble phosphates); total solid matter, dried at 100° C., 60.28 per cent. Nutritious and stimulating elements like these are rarely found combined in so satisfactory a manner.” *The Lancet.*

Samples supplied by the

LIQUOR CARNIS CO., LTD., ASTON CLINTON, BUCKS.

NESTLÉ'S FOOD

FOR

INFANTS & INVALIDS.

"Invaluable in Cholera Infantum."

"Beneficial as a Diet in severe cases of Typhoid."

"Renders valuable assistance in Wasting Fever"

PAMPHLET containing Extracts from Standard Medical Works in which the above

Testimony is given, sent free with Sample Tin on application to

H. NESTLÉ,
9, Snow Hill,
LONDON,
E.C.

HIGHEST HONOURS at the CHICAGO EXHIBITION,
THE MEDAL and DIPLOMA have been
awarded both to NESTLÉ'S FOOD and NESTLÉ'S MILK.



ATTENTION

is also drawn to

NESTLÉ'S SWISS (CONDENSED) MILK.

Which through its RICHNESS in CREAM and UNIFORMITY of QUALITY has obtained the LARGEST SALE IN GREAT BRITAIN.

It can be used for all purposes of FRESH MILK.

Samples to members of the Medical Profession sent free on application to

H. NESTLÉ, 9, SNOW HILL, LONDON, E.C.

In complete sensory aphasia, on the other hand, there is profound affection of the mind. In almost all cases reasoning is not practicable, owing to the obliteration of auditory and visual percepts, though a degree of thought may be possible to some by the exercise of motor intuitions of speech and of writing. In the majority, however, the lesion is incomplete, and one sense is usually involved more than the other. Should it be the auditory which is specially implicated, the mind generally suffers much more than where the visual sense is chiefly affected. Where the defect is limited to the reception of new impressions, and the faculty of recollection is retained more or less, the reasoning power and judgment may not be appreciably implicated, but this is rare; generally there is some concurrent amnesia, and then the mental power is to a greater or less degree enfeebled. The degree of mental implication thus corresponds closely with the extent of the loss of words, especially when of auditory type, the judgment is merely weakened, and in some cases there is emotional instability, but the moral powers are not weakened or disordered, and there is no excitement of the feelings or depression. (Clouston, Savage, Tuke, D. H.; Lewis, Fouillée, Gowers, Ribot, Robertson, Tuke, B., and Sims Woodhead, Wilks.)

In acute obstructive cerebral softening, mental incapacity, loss of memory, and emotional instability are the most pronounced mental features. Idiocy may result in the young from cerebral softening, and this may be either general or affect only certain parts, being due, as a rule, to ventricular and sub-arachnoid effusion, chronic hydrocephalus, thrombus of the middle cerebral arteries and superior longitudinal sinus, tubercular or simple meningitis, or a tumour. In chronic progressive softening, mental symptoms are vague. There may be apathy, mental dulness, and occasionally intellectual defect, but this last is rare. (Gowers, Wilks, Beach, Shuttleworth.)

The condition known as infantile hemiplegia may produce mental defect ranging from mere functional derangement, such as hysteria, to pronounced idiocy. The class of paralytic idiots,

in fact, may have various cerebral or spinal causative factors. Duchenne states that pseudo-hypertrophic muscular paralysis is accompanied by a variable degree of imbecility, and in reference to this I can recall a case I saw, in consultation with Dr. Brown-Séquard, of a young girl, with paternal alcoholic and maternal insane history, in whom this particular progressive paralysis was associated with progressive idiocy, the two developing conjointly. Infantile spinal paralysis and spastic paraplegia may in like manner be followed by idiocy. (Beach, Shuttleworth, Major, Osler.)

Cerebral abscess in its terminal symptoms shews certain marked mental digressions. The final stupor leading to coma may be preceded by delirium or by melancholia with suicidal proclivities. In the latent period of chronic abscess slight mental disturbance, usually melancholic, may be the only symptom. Towards the end of the latent period simple mental failure, or chronic mental affection of a melancholic type, is common. In fact, the course of a chronic cerebral abscess may be gauged by the occurrence of these symptoms, which gradually grow worse until they pass into the severe terminal stage. (Gowers, Kohler, Beach.)

Cerebral tumour, in any situation, may give rise to various mental symptoms. There may be either simple mental defect, with loss of memory and depression, emotional excess, and occasionally excitability. At other times more pronounced mental symptoms may ensue—delusions, with hallucinations of vision when the tumour is situated in the temporal lobe, or simple chronic mania when the tumour is situated in the anterior portion of the frontal lobe, though these cases may also be epileptic, and exhibit a restless excitable dementia with childish acts. Auditory hallucinations are not uncommon, and are found in tumours of the pons when they may be unilateral, or in tumours of the base where they are usually bilateral. In proportion to the frequency of cerebral tumour, however, it is rare as a direct cause of pure insanity, the principal varieties inducing mental disturbance being sarcomatous, tubercular, and

syphilitic growths, the last-named being the most common. Tubercular or gliomatous tumours have been found as the primary cause of idiocy. (Beach, Packer, Gowers, Gasquet, Smith, P.)

Mental dulness and irritability have been noted by some as psychic results of aneurisms in various situations, but more frequently when the anterior cerebral artery was affected, and least often by aneurisms of the internal carotid and middle cerebral arteries. (Gowers, Wilks.)

It may be of interest in this connection to trace the effect of syphilis on the higher cerebral functions, whether as hereditary or acquired. In hereditary syphilitic affection the mental disturbance may be considered, according to its period of development, as *idiocy* or as *juvenile dementia*. Idiocy due to congenital syphilis is comparatively rare, owing no doubt to the fact that the majority of affected infants die early in consequence of other cerebral syphilitic complications. Such as survive and shew arrested mental development, may subsequently become epileptic or paralysed. This idiocy is due to a foetal or early infantile meningo-encephalitis, or is the result of congenital hydrocephalus. Syphilitic transmission may also possibly affect nerve-elements apart from demonstrable changes, and so lead to idiocy, just as acquired syphilis may (though this is disputed) form the primary causative factor of locomotor ataxy. As Hughlings Jackson points out, idiocy readily results when an imperfect brain, due to insane heredity, is engrafted with syphilis. Juvenile dementia, on the other hand, is a common result of inherited syphilis. Intellectual arrest of development usually occurs at from five to ten years of age; the child is observed to lose its brightness and sharpness, its memory grows deficient, it loses interest in childish amusements, its attention cannot be roused or, if so, maintained; and it gradually drifts into a demented state, such being usually preceded by or associated with convulsive attacks, hemiplegia, etc. In other cases evidences of cerebral disease may be absent, the dementia alone existing; or the paralytic effects may be so slight as to be over-

shadowed by the prominence of the psychical defect. Maniacal attacks are recorded in some cases, with hallucinations and illusions; but the general mental result is intellectual failure, complete apathy, amnesia, and a purely vegetative existence. In the acquired form syphilis may give rise to epilepsy, due to irritative thickening of the meninges, local gummatous swellings growing into the surface of the brain, or to some specific vascular lesion. This epilepsy of syphilis tends, as Savage and others have pointed out, to mental obtuseness and stupidity rather than violence, and the epileptic furor is rare. If not cured by treatment, these cases lapse into local paralysis and dementia. Hemiplegia with resultant hopeless dementia, preceded by mental excitement in some cases, has also been noted as a sequela of acquired syphilis, and in a few instances local syphilitic paralyses have been found to induce a moral degradation inconsistent with sanity. The probably close relation syphilis bears to general paralysis I have endeavoured to shew elsewhere. (Barlow and Bury, Beach, Bullen, Meckle, Savage.)

In insular sclerosis there is nearly always a definite and characteristic mental change—the patient betrays a degree of contentment and complacency quite out of character with his physical distress, the increasing helplessness does not appear to affect his fatuous happiness of mind, and he is unnaturally cheerful over his sufferings; with this there is usually associated defect of memory. Insanity proper is not a frequent result of this lesion, but in some undoubted cases there has been mental excitement tending to dementia. (Gowers, Lewis, Wilks.)

Batty Tuke describes the occurrence of chronic insanity in a case of miliary sclerosis, and he and Sims Woodhead have recently urged the occurrence of this as a degenerative brain and cord change, and their views have received support from Bevan Lewis. (Tuke and Sims Woodhead, Lewis.)

In chronic bulbar paralysis many observers have noted the peculiar emotional mobility, laughter or tears being evoked by slight causes, which is nearly always present. There does not

however appear to be any concurrent intellectual implication, and the patient is aware of his weakness. (Gowers.)

Atrophy of the brain when general is the cause of the condition known as microcephalous idiocy. The spinal cord shares in this abnormality and is probably a dependent effect; the pathology of this condition is unknown. Partial atrophy, either congenital or acquired (the latter in early infantile life) is due to inflammatory meningeal states such as have already been described. (Beach, Ireland.)

Cerebral hypertrophy is a rare but undoubted cause of idiocy. It may occur in very young children soon after birth, when the cephalic enlargement is frequently mistaken for hydrocephalus, or towards the end of the first year of life in association with rickets. It is said also to occur in older children and adults, and to induce imbecility. (Bernardini, Beach, Shuttleworth.)

In the chronic form of hydrocephalus there is, as is well known, considerable mental defect frequently amounting to idiocy; upon this epilepsy and other cerebral changes may supervene and further blight the mental condition. Gowers draws attention to the condition known as Primary Hydrocephalus, where internal effusion may occur at any age, due probably to ventricular inflammation; mental weakness is here a prominent symptom. (Gowers.)

The group of nervous affections for the explanation of which we have to take refuge in the assumption that they are due to nutritive alterations in the nerve elements, and are what are termed functional diseases, presents us with far more constant and definite mental disorders than do the neuroses due to perceptible lesion.

Chorea may either in the prodromic period or at the height of its existence shew a certain degree of mental implication. As a prodrome, mental derangement may exist for some weeks or even months before the onset of the motor symptoms—great excitability, unsteadiness of temper and rapid changes from exaggerated merriment and wildness to irritability are its characteristics in adults; in children such symptoms are seldom

seriously regarded, and will be assumed for a time to be extraordinary but natural outbursts of temper and wilfulness; in some there is an unusual depression of spirits with causeless excitability, fits of crying and passionate outbursts. There does not appear in this antecedent stage to be any direct intellectual defect, but rather a mental instability due in all probability to a progressive reduction of that inhibition essential to normal mentality. When the motor phenomena appear the mental obliquity may disappear, or, as is more usually the case, may be overshadowed by the prominence of the more attractive abnormalities of gesture. In nearly every case of chorea one can detect some mental abnormality. There is usually irritability, often distinct mental dulness conspicuous in the patient's facial aspect, and the degree of mental affection is in no way proportionate to the severity of the physical symptoms. The mental dulness may become a stuporous form of melancholia wherein the patient is absolutely regardless of himself or his surroundings, neglects the calls of nature, and is completely apathetic and listless, or the irritability may be intensified into morbid excitement and a condition bordering closely on mania. We see in these comparatively slight cases even an involuntary impulsiveness of conduct; we note the influence of mental stimulation on the choreic motor disturbance, the remission brought to almost every case by sleep, the almost total immunity of the involuntary muscular system, the implication in chief of those muscle groups normally connected with mentality, and how the more complicated and less automatic the movement so much the greater is the disturbance in range and direction. Closely allied as muscular movements are with normal processes of thought it is not to be wondered at that the will intellect and feeling should suffer, that the patient should become irritable and aggressive in his moods, and that his ideas should partake in a measure of the character of these movements and become clumsy, comical, and impulsive.

But this mental digression is not the only outcome of the affection; as a consecutive mental derangement we may have

true maniacal excitement. This rarely begins before the first or after the fourth week from the commencement of the chorea. It usually occurs in girls or young men at or soon after puberty, and is not an uncommon complication of pregnancy. The mental affection begins by an exaggeration of all the motor symptoms. This is speedily followed by deliberate aggressive acts, which, being hampered by the contortions which have now become wildly exaggerated, lead to severe self-injury. Such patients indiscriminately attack those near them, regardless of consequences to themselves, smash crockery, fling themselves on the floor, clutch at anything near them, and writhe and twist in furious restlessness. As in all exalted states, they attribute their actions to external agencies. Their delusions are of a persecutory or suspicious type coupled with vivid hallucinations, especially visual, and not uncommonly illusions of all the senses. The attack runs a rapid course, the excitement quickly subsiding, and the patient in a few weeks recovers. In some cases, however, the mental symptoms persist, and the patient drifts into a chronic insane state, though his motor choreic phenomena may long ago have disappeared. But such even is not the extreme degree of mental affection which may accompany this neurosis. Cases of acute delirium may supervene which, in their characteristics, bear a close likeness to acute delirious mania in the intense excitement, the vivid terrifying hallucinations of hearing and vision, the perversion of the senses of smell and taste, the presence of febrile symptoms, the rapid exhaustion, and ultimate death. Such a condition occurs sometimes, too, in the chorea of pregnancy, and it may then run a subacute course, ending in recovery some time after delivery. In some cases of adult and senile chorea progressive dementia of a chronic nature may ensue, and, in a few, maniacal excitement. In the chronic form of chorea there may be chronic mental disturbance — delusional ideas of persecution, illusions and hallucinations of sight and hearing — and the general tone of the conduct is, in consonance with the impulsive nature of the somatic affection, offensive and dangerous.

Krafft Ebing mentions the commission of murder by one such patient. Later, there is intellectual weakening drifting into dementia. A peculiarity of all cases of choreic insanity is the involuntary use of filthy expressions; but, unlike ordinary acute mania, there is very little of that incessant garrulity and incoherent loquacity which distinguishes that mental affection. (Arndt, Eade, Huntingdon, Meyer, Ruhemann, Wigglesworth, Wilks.)

The mental abnormalities due to Paralysis Agitans may be divided into three distinct classes. 1. Such patients who exhibit nothing but a change of temper and character, who are irritable, troubled and excited over small matters, who resent contradiction, and fly into a furious passion over trifles; they are restless, distrustful, and suspicious, very exacting, taciturn, and emotional, and their disposition is mirrored in their facial expression, which is one of intense grief; they become apathetic, indifferent, and perfectly regardless of everything that interested them prior to the onset of their affection. Moroseness and irritability are the features of this class. 2. Such patients who evince some intellectual weakening, which may vary from simple mental blunting of the intellectual faculties to complete dementia. Memory becomes defective, thought slow and difficult, and there is a lack of mental lucidity. The symptoms become aggravated, and mental decrepitude ensues long before the advent of old age. The mental state becomes pictured in the facial expression, which is vacant, listless, almost, as Ball has described it, stuporous in its type. Such a condition progresses slowly to incurable dementia. Vacancy and mental apathy are the features of this section. 3. Such patients as exhibit, in place of this passive, an active mental alienation.

The most common form of insanity is melancholia, which is apparently the morbid outgrowth of the first class. This melancholia may be simple, or may be associated with auditory and visual hallucinations and illusions, insane conceptions—the outgrowth or accompaniment of these—and sensory (visceral or cutaneous) illusions or hallucinations. The delusional ideas

are mainly of persecution, and, by the further development of such, these patients may become excessively dangerous to those about them; or they may become acutely suicidal, generally impulsively so. This state differs from ordinary idiopathic persecution mania in the presence of vivid visual hallucinations, which never occur in the latter affection. Now and then mental exaltation takes the place of the depression, or there may be a species of *folie circulaire*, the exalted state being one of amenomania. Ball states that the insanity varies directly with the tremor in intensity, but this Parant denies. The usual tendency of these cases is toward sequential dementia. (Atkins, Ball, Parant.)

Mental disorder may result from Epilepsy no matter whether its cause be idiopathic or due to lesion. In childhood the result of frequently recurring epileptic fits is an arrest of further mental development (idiocy) or an interference with that development (imbecility). The danger to the higher centres lies not so much in the severity as in the frequency of the fits, and permanent damage to the mental faculties usually ensues in rapidly recurring fits before the age of seven. Insanity occurring in an epileptic may precede the seizure (when it exhibits itself in various ways) may probably take the place of a fit, or may present itself as a post-epileptic phenomenon. As a precursor of the seizure, mental abnormality may be shewn by sensory perversions of one kind or another. The aura may be a hallucination, frequently visual, sometimes auditory, olfactory, or tactile; such hallucinations may always precede a fit, just as a definite motor act may precede an attack of Jacksonian epilepsy. Again, a mixed condition—Hughlings Jackson's "dreamy state"—may precede the fit. Dependent on these sensory hallucinations, though perhaps not consciously so, delusions may arise, mainly of persecution, resulting in unfounded accusations and complaints. These may indeed be simply the expression of an ante-epileptic phase, similar to the better known and more frequently described post-epileptic conditions. Before a fit, too, we may have a maniacal outburst,

lasting from a few hours to two or three days, prior to the seizure.

It is still a question whether epilepsy is ever completely replaced by a mental disorder, but a case under my care some years ago would seem to prove its possibility. A lady who for years had frequently-recurring epileptic seizures of *grand mal* type, at her climacteric suddenly developed paroxysmal onsets of furious mania, lasting from a few minutes to nearly an hour at a time, in which she would make the most ferocious assaults in a blind impulsive manner on those about her. Her epileptic fits from the commencement and during the course of these were in complete abeyance. Under treatment she improved, the severity of her accessions diminished sufficiently to allow her to return home, and she there soon recovered, but with the disappearance of her insanity there was a redevelopment of her epileptic attacks which still continue at fairly regular intervals. Post-epileptic automatic acts, whether of *petit mal* or of so-called larvated epilepsy, are too well known to be here described. Of the more pronounced post-epileptic forms of insanity that known as epileptic mania is perhaps the most interesting. In this form every fit may be followed by a maniacal outburst, or the mania may appear only after certain seizures, but each recurrent excitable onset is identical in nature to the preceding one. During the intervals these patients are fatuous and weak minded, but their post-epileptic accessions are of wild homicidal furor springing generally out of some indefinite unformed persecutory ideas. In rare cases melancholia may take the place of the maniacal outburst, and I have known cases in which a suicidal tendency was then very marked. With years of recurrence of these attacks the mental condition degrades, they become filthy, indecent, and bestial in their conduct, and their control is a matter of grave anxiety. Other phases of epileptic mental affection range from slight impairment of memory to constant conditions of irritability, impulsiveness, and uncertainty of character, wherein auditory hallucinations frequently influence the conduct. Hallucinations of all the senses are common, and

they may take the character of the physical symptoms and be explosive in their nature. (Anderson, Bullen, Dent, Jackson, H. ; Lewis, Packer, Savage, Tuke, D. H.)

Infantile convulsions may by frequent recurrence and severity induce idiocy, or the convulsions may merge into fits of an epileptic type with the consequent mental developments.

Migraine may in some cases have some mental disturbance as an antecedent ; brief stupor without complete unconsciousness may occur just as the attack commences without interrupting the progress of the sensory disturbance. During the attack there may be emotional depression, restlessness, confusion of ideas, and sometimes transient loss of memory. Some observers state that a condition of dual consciousness, such as is observed in the somnambulistic stage of hypnotism, may supervene during an attack. The mental change may be the earliest symptom or it may succeed the common visual affection. Liveing mentions a case of migraine alternating with paroxysmal insanity, and in one case acute mania came on. (Gowers, Wilks.)

The translation of neuralgic symptoms in the insane into delusions of persecution is certainly not uncommon, but the influence neuralgia has in the production of insanity is by no means great. I have seen the incessant and excruciating agony of an inferior dental neuralgia induce an attack of acute mania, but this is the only instance I can find in my own experience. Heinrich Schüle has lately ably described the influence exercised by various neuralgias during the development of psychoses, but it is in the essential origination of these latter that we are here more closely concerned. Neuralgias of various forms may precede the development of different types of anæmic insanity, but they are then the peripheral expression of nerve starvation of which the functional break down, viz., insanity, is a more central phenomenon.

The prominent mental peculiarity of hysteria is an exaggerated self-consciousness, dependent on undue prominence of feelings uncontrolled by the intellect ; that is to say, there is a preponderance of widely diffused misdirected nervous dis-

charges on the physical side, and an absence of that normal psychical control which should direct such discharges into proper channels. The hysteric, like the lunatic, is pre-eminently an individualist, an unsocial egotist, who fails in adaptation to organic surroundings. This predominant disorder in the sphere of feeling is generally accompanied by more or less evidence of intellectual disturbance, as betrayed in the indulgence of numerous vagaries of conduct; but in the majority of cases intellectual disorder is not conspicuous, and mental abnormality is limited to an exaggerated sensibility to external impressions or to a lack of moral control. It is thus a difficult matter to draw a sharp line of demarcation between Hysteria and Insanity, and in fact the two frequently overlap. The hysteric, as a rule, recognises the impropriety or outrageousness of those actions in which she indulges; but the insane patient may do this, too, though in the latter there is less purposeful hankering after sympathy or notoriety which is the characteristic of the hysteric. Hysterics are deficient in energy or in its appropriate direction; some may be absolutely inert, others actively mischievous, so that imposture, exaggeration of suffering, simulation of disease and crime are common. Disorders of sensation or motion, plainly outside voluntary control, are accompanied by crafty slyness of conduct. Wilks has especially drawn attention to the tendency to moral perversion. So that on the one side there may be mental disturbance bordering closely on insanity, and on the other, physical exhibitions simulating disease, while between the two may occur a most incongruous mixture of mental and physical abnormalities. Maniacal attacks with definite delusions may occur, the mental instability passing into true insanity; and some of the most violent forms of acute mania, and even acute delirious mania, are the outcome of this neurosis. Hysterical Melancholia is rare, but cases are on record as occurring in young girls. (Arndt, Wilks, Charcot, Charcot and Marie, Donkin, Gasquet, Gowers, Guinon, Siemerling, Briquet.)

As the result of traumatism, insanity may follow injuries to

"Ranks with Quinine."

"LACTOPEPTINE

is one of the CERTAINTIES in Medicine, and in this respect ranks with Quinine."

Prof. L. P. VANDELL.

LACTOPEPTINE will digest from three to four times more coagulated albumen than pepsin.

LACTOPEPTINE will emulsionise and prepare for assimilation the oily and fatty portions of food, pepsin having no action upon these important alimentary substances.

LACTOPEPTINE will change the starchy portions of vegetable food into the assimilable form of glucose.

LACTOPEPTINE contains the natural acids secreted by the stomach (Lactic and Hydrochloric,) without which pepsin will not do its work.

Pepsin is not applicable in a very large class of dyspeptic cases, while LACTOPEPTINE, containing all the digestive agents found in the system, and dissolving all kinds of food, cannot be administered in cases of genuine dyspepsia without producing beneficial results.

LACTOPEPTINE, being presented in the saccharated form, is most agreeable to the taste, and can be administered even to the youngest child.

Prices to the Medical Profession : 1-oz. bottles (retailed at 4/6), 45/- per dozen ; 1-oz. bottles (unstamped), for Dispensing, 39 - per dozen ; postage on a single ounce (extra), 3d. ; 4-oz. bottles (unstamped), for Dispensing, 10/6 each ; post free, 10/9 ; 8-oz. bottles (unstamped), for Dispensing, 20/6 each ; post free, 20/11.

Manufacturer, JOHN M. RICHARDS, 46, Holborn Viaduct, London.

Telegrams : "ADRIATIC, London."

TELEPHONE No. 3511.

ENGLISH AND FOREIGN PHARMACY,
FIVE WAYS, EDGBASTON, BIRMINGHAM.

T. CHASE,
PHARMACEUTICAL CHEMIST.

The strictest accuracy and attention given to the Dispensing of Medicines.
Drugs, Chemicals, and Pharmaceutical Preparations of the highest quality.

Foreign Prescriptions are dispensed in strict accordance with the Pharmacopœias of their respective countries. As new Chemicals and Pharmaceutical Preparations are introduced, they will be added to the stock.

Technical Analyses of all kinds conducted.

Every Description of Aerated and Mineral Waters.

Gold Medals, Paris, 1878:1889.

JOSEPH GILLOTT'S

Of Highest Quality, and Having
Greatest Durability are Therefore
CHEAPEST.

PENS

J. F. THORNEYWORK,

MANUFACTURER OF

Artificial Limbs, Trusses, Surgical Instruments,

ELASTIC STOCKINGS, KNEE CAPS, ABDOMINAL BELTS, &c.,

54, HOLLOWAY HEAD, BIRMINGHAM.

 Instrument Maker to the Birmingham Orthopædic Hospital, for the Cure of Bodily Deformities. Newhall Street; General and Queen's Hospitals; Dudley Dispensary; Stafford Infirmary; Cottage Hospital, Walsall; and Guest Hospital, Dudley.

the head, it may follow other injuries, or it may be the sequel of surgical operations. In all these varieties the insanity may occur after an indefinite period of quiescence, or may date practically from the injury. In the acute or direct form the insanity appears to be but a morbid development of disturbances, which, shewing first as traumatic fever, next pass into delirium, and then progressively, as it were, to insanity. Delirium tremens, as is well known, may occur in intemperates affected by some injury. The greater number of cases of traumatic insanity recover, but in a certain number the mental symptoms persist for some time, and in patients who are old or prematurely broken down it may pass into incurable dementia. Head injuries are the most frequent of the traumatic causes of insanity, and this is by no means due to heredity towards mental disorder or in proportion to the severity of the injury; even deep coma, persisting for days, may pass off without the occurrence of mental disorder, save, perhaps, loss of memory. In the later stages the principal psychoses are associated with traumatic epilepsy, due to ostitis of the inner diploic table or pachymeningitis. Any form of insanity may follow, as in the idiopathic form. In those forms of insanity not due to epilepsy there is still frequently to be found some local irritating cause. A peculiar feature of these cases is their extraordinary alcoholic idiosyncrasy. As consequent on other bodily injuries insanity is rare, some irritating reflex cause may nearly always be found, such as a foreign body, an adherent cicatrix, or bony spicule pressing on a nerve trunk, etc. Wendt and Brown-Séquard mention such cases. Insanity also is a very rare result of surgical traumatism. It does however occur, especially in patients free from hereditary taint of insanity or even nervous instability. There is always a quiescent period after the operation, usually from three to eight days (but in a case of my own, ten days), and the onset of the insanity appears to exercise no injurious effect upon the healing of the wound. Acute mania may follow severe operation, and end in speedy death from exhaustion; or acute persistent suicidal melancholia may

result, as in one of my own cases. Insanity following anæsthetism has been described, but belongs rather to the special forms of toxic insanity. Idiocy may ensue after falls and blows on the head in young infants, and prolonged and compressing labour. Fletcher Beach and Shuttleworth estimate accounts for over 6 per cent of cases of idiocy. Injury to the head may also, as I have pointed out elsewhere, operate in starting the action of a morbid poison, such as syphilis, and induce the onset of general paralysis. (Beach and Shuttleworth, Dent, Mickle, Oppenheim, Page, Rayner, Smith, P.)

It would not be right to omit from this category the *cérébraux* of Lasègue—those patients who have received an injury years ago, and whose whole disposition, character, and habits, undergo a revolution, which however cannot be called insanity; apathy, irritability, excessive emotion, loss of memory, and in some cases moral depravity and impulsive acts; in after years mental weakness may ensue, and finally attacks of temporary insanity. (Motet.)

Of spinal cord diseases other than those already mentioned, locomotor ataxy is the only one that furnishes us with any fairly constant mental abnormalities. The onset of the disease may be followed by the development of insanity; the two affections may be associated, or according to Savage they may shew alternation, the one standing out prominently while the other is in comparative abeyance. During the progress of locomotor ataxy what are known as "mental crises" may occur, short sharp maniacal attacks with delusions of suspicion as to the cause of the painful bodily sensations, or there may be insane interpretations of the ordinary crises, and here the mental condition may either alternate with the disease in severity or may become chronic, without however the sequential dementia. Locomotor ataxy, like (according to Savage) lateral sclerosis, may be the forerunner or associate of general paralysis, and then the particular form of dementia ensues. Moral insanity may be the development during the preliminary symptoms, or the physical infirmity may establish a melancholia with delusions of unwor-

thiness. Hypochondriacal depression is also not uncommon. (Gowers, Wilks, Savage.)

Such are the most constant mental phenomena occurring in cerebral and spinal affections. I have been unable to allude in this paper to post febrile forms of alienation or to the insanities of toxic origin; these must be regarded as neuroses proper, probably of toxæmic derivation. I took occasion last year to review general paralysis as a distinctive psycho-neurosis, and I hope in a future paper to deal with the inferences that may be drawn from a general review of these nervo-psychic symptoms in relation to the probable pathology of idiopathic insanity.

BIBLIOGRAPHY.

- Anderson, J.*—Epilepsies and Insanities (Tuke's Dict. Psych. Med.).
Arnold, R.—Chorea and Psychose (Arch. f. Psych. und Nervenkr., 1868).
 Neurasthenia (Tuke's Dict.).
Atkins, R.—Insanity with Paralysis Agitans (Journal of Mental Sc., xxvii.).
Ball, R.—De l'insanité dans la paralysie agitante (Encephale, 1882. Proc. Internat. Med. Congress, Lond., 1881).
Barlow and Bury.—Syphilitic Hereditary Disease of the Nervous System.
Beach, F.—Pathology of Idiocy (Tuke's Dict.). Atrophy of Brain (Journ. Ment. Sc., xxviii.). Cases of Tumour and Cysts of Cerebellum (Journ. Ment. Sc., xxxi.). Disease of the Brain in Imbeciles (Journ. Ment. Sc., xxxiv.). Hypertrophy of the Brain in Imbeciles (Journ. Ment. Sc., xxvii.). The Causation of Idiocy and Imbecility (Journ. Ment. Sc., xxxv.).
Beach, F., and Shuttleworth, C.—Idiocy; its Pathology and Treatment. Idiocy and Imbecility.
Bernardini.—Cerebral Hypertrophy in Idiocy (Journ. Ment. Sc., xxxvi.).
Briquet.—Traité de l'hystérie.
Bullen, F.—Syphilitic Epileptic Idiocy (Journ. Ment. Sc., xxxvi.).
Charcot.—Leçons sur les maladies du système nerveux.
Charcot and Marie, P.—Hysteria (Tuke's Dict. Psych. Med.).
Clouston.—Textbook of Mental Disease. Phthisical Insanity (Tuke's Dictionary).
Dent, C.—Insanity Following Operations (Journ. Ment. Sc., xxxv.). Traumatism and Insanity (Tuke's Dict.).
Donkin, H. B.—Hysteria (Tuke's Dict.).
Eade.—Chorea and Insanity (B. M. J., 1889).
Fouillée.—La survivance et la sélection des idées dans la mémoire (Rev. des Deux Mondes, 1885).
Gasquet.—Mental Symptoms of Brain Disease (Journ. Ment. Sc., xxx).
Gowers.—Diseases of the Nervous System.
Gurnon.—Les agents provocateurs de l'hystérie.

- Huntingdon*.—Chorea and Insanity (Phila. Med. Rep., 1872).
- Ireland, W.*—Microcephaly (Tuke's Dict.).
- Jackson, Hughlings*.—Evolution and Dissolution of the Nervous System, 1888.
Post Epileptic States (Journ. Ment. Sc., 1888). Diagnosis and Treatment of Diseases of the Brain (B. M. J., 1888).
- Kohler*.—Abscess in the Brain (Journ. Ment. Sc., xxv.).
- Lewis, Bevan*.—Textbook of Mental Disease.
- Major, H. C.*—Paralytic Idiocy (Journ. Ment. Sc., xxv.).
- Mercier, C. W.*—Sanity and Insanity.
- Meyer, Ludwig*.—Chorea and Insanity (Tuke's Dict.). Chorea u. Manie (Arch. f. Psych. u. Nervenk. 1871).
- Mickle*.—Insanity following Injury to the Head (Journ. Ment. Sc., xxxi.). Syphilis and Mental Alienation (Journ. Ment. Sc., xxv.) Traumatic Factor in Mental Disease (Tuke's Dict.).
- Motet, A.*—Cérébraux (Tuke's Dict. Psych. Med.).
- Osler*.—Idiocy and Feeble-mindedness in relation to Infantile Hemiplegia (Journ. Ment. Sc., xxxvi.).
- Orpenheim*.—Die traumatischen Neurosen, 1889.
- Packer, W. H.*—Epilepsy connected with Cerebral Tumour (Journ. Ment. Sc., xxviii.).
- Page, H. W.*—Shock from Fright. Injuries and Nervous Shock (Tuke's Dict.).
- Parant, Victor*.—La paralysie agitante examinée comme cause de la Folie (Ann. méd. psych., 1883).
- Rayner, H.*—Insanity after Head Injury (Journ. Ment. Sc., xxx).
- Ribot*.—Disorders of Memory (Tuke's Dict.).
- Robertson, Alex.*—Post-apoplectic Insanity (Tuke's Dict.).
- Ruhemann*.—Chorea Gravidarum, 1889.
- Savage, G.*—Textbook of Mental Disease. Epilepsy and Insanity. Locomotor Ataxy and Insanity. Syphilis and Insanity (Tuke's Dict.).
- Shuttleworth, G.*—Ætiology of Idiocy (Journ. Ment. Sc., xxxv.).
- Siemerling*.—Mindblindness (Tuke's Dict.).
- Smith, Percy*.—Brain Surgery causing Insanity (Journ. Ment. Sc., xxxvi.). Tumours of Brain and Mental Derangement (Journ. Ment. Sc., xxxii.).
- Tuke, B., and Sims Woodhead*.—Pathology of Idiocy.
- Tuke, D. H.*—Textbook of Mental Disease, Dict. of Psych. Med. Pre-epileptic Conditions (Journ. Ment. Sc., xxxiv.).
- Wiglesworth*.—Chorea and Insanity (Journ. Ment. Sc., xxviii.).
- Wilks, S.*—Lectures on Diseases of the Nervous System. Delirium (Tuke's Dict.).
-

REPORTS OF CASES.

CASES OCCURRING IN GENERAL PRACTICE.

BY E. N. NASON, B.A., M.B. CAMB.

Intense Optic Neuritis, with symptoms of cerebellar tumour ; possibly due to anæmia.

L. M., aged 13, was suddenly seized on December 24th, 1890, with vomiting accompanied by a feeling of chilliness. She had suffered for some days from headache, but had otherwise previously been well. Sickness and headache continued for five days, at the end of which time I first saw her. Her temperature was then normal, but she vomited everything she took ; she complained much of headache. She had been slightly anæmic for some time past, but not markedly so. Stomachic treatment did not improve matters, but headache and vomiting rather increased, and the temperature rose to 102° two days later, and remained raised for four days when it dropped suddenly, and her other symptoms at the same time disappeared. A few days later she seemed quite herself again, but complained of constant noises in her ears which noises proved to be increased synchronously with the pulse.

On February 28th she had a second attack beginning exactly like the first. Next day I examined her eyes and found neuro-retinitis well marked in both. There was in addition much old inflammatory exudation along the course of some of the retinal vessels, most marked in the left eye. Her temperature was normal, and the vomiting and headache had somewhat abated without treatment. Next day her temperature was 99.5° and pulse 100, and she began to complain of pain down the spine coming on in paroxysms but not entirely disappearing in the intervals. Vomiting and headache still continued. This pain,

which was very severe lasted for eight days, each paroxysm lasting about five minutes with irregular intervals between. She described the pain as commencing in the frontal region, then spreading backward to the right side of the occiput, and then affecting the whole length of the spine. The pain down the spine, which was sufficiently severe to make the child scream out, was relieved to some extent by hot applications and by firm pressure. The child also at times complained of numbness and pins and needles in the fingers. Her temperature and pulse remained unaffected and the urine was natural. There was some dulness of hearing on the left side, but no earache or discharge from the ear. Patient complained that on several occasions, for a minute or so at a time, she had been unable to see anything.

From this time (March 12th) till the middle of April patient had repeated attacks of headache and vomiting, but not so severe as the earlier ones, and not accompanied by pain down the spine.

On April 24th patient's eyes were examined again, when there was present a most intense neuro-retinitis in both. Most of the vessels were buried in exudation in different parts of their course; the discs were greatly swollen, and could not be defined at their edges.

On May 10th patient had an attack of pain in the right ear, and complained that the noises in her ears, which had been absent for some time, had returned. This pain, however, only lasted a day, and then disappeared. At this date patient was put upon—*℞. ferri perchlor. ʒ x., with glycerine ʒ i., three times a day.*

After this there was no return of the headache, etc., and by the end of August the neuritis had almost disappeared (the left eye clearing before the right), and apparently left very little permanent damage. Patient remained in excellent health till April 3rd, 1892, when she had an attack of headache and vomiting lasting till April 12th, and again accompanied by slight commencing optic neuritis. She was again put on iron, although

there was no appearance of anæmia, and her neuritis soon cleared up. Since that time until the present (March, 1894), she has remained in excellent health.

Acute Septicæmia. Osteo-myelitis (?).

W. S., a stable boy, age 16, complained on January 11th, 1893, of pain in the left hip and down the outer side of the left thigh. It was noticed that he limped a little. His temperature was taken, and found to be 102° . He was sent to bed, although he considered himself able to continue his work. Next morning he wished to be allowed up, stating that he felt much better, although the pain was still present. His temperature, however, was found to be 104° . The thigh and hip were carefully examined, but nothing could be found, except some tenderness between the great trochanter and crest of the ilium and, to a less extent, along the shaft of the femur. There was no swelling, oedema, or redness; there had been no rigors. The pulse was 100 and fairly strong, and the breathing natural. I noticed, however, that the face and lips had that intense cherry-redness that is so often seen in the early stage of acute bone inflammation. The temperature that night rose to 104.5° , and was accompanied by great restlessness and occasional wandering.

Next morning, January 13th, the pain had certainly increased, and pain in the left wrist was complained of. There was, however, no swelling of the wrist, and no tenderness or pain on movement at the wrist joint. The hip and thigh were again examined, but nothing more definite found, except that movement at the hip joint was painful, and the position of greatest ease was when the patient was lying towards the right side with the left leg extended but slightly adducted. The temperature was still 104° , and the urine contained a cloud of albumen. The advisability of exploring the upper end of the femur was considered, but the consent of the parents, who lived at a distance, had first to be obtained. That night patient was very delirious, and passed urine involuntarily. Pulse and respirations were both increasing in frequency. Examination of the suspected area revealed nothing further.

That night, January 15th, patient became rapidly worse. Temperature rose to 105° , and delirium became still more marked and signs of failure were evident. Pleuritic and pericardial friction sounds began to appear, accompanied by some rusty sputum. Increasing cyanosis, quickening pulse (180 per minute) and respirations, and muttering delirium terminated in death the next day.

No *post mortem* was allowed; the case was probably one of acute osteo-myelitis, commencing in the upper end of the left femur, no doubt of septic origin, and ending in general septicæmia. The early symptoms were too indefinite to warrant operation, and the disease ran so rapid a course (five days) that there was no opportunity at a later date.

Suppurating Hæmatoma of Axilla with Severe Recurrent Hæmorrhage.

W. M., a butcher's assistant, age 17, while lifting a side of bacon, "strained" his shoulder. Some days later a painful swelling formed at the back of the shoulder. On examination, there was found to be swelling, redness, œdema, and tenderness by the side of and over the left scapula posteriorly. Two days later there was a brawny œdema and redness over the whole of the scapula posteriorly, and down the arm as low as the elbow, accompanied by extreme tenderness. There was, in addition, deep fluctuation to be made out along the posterior axillary fold. The temperature was 103° , and the boy was extremely ill.

I suspected acute periostitis of scapula or neck of humerus. Under an anæsthetic, an incision was made over the posterior border of the scapula at the point where fluctuation was most evident. After dividing the skin, I passed my finger towards a tense sac, which was situated in the posterior part of the axillary space, and much more deeply seated than I at first thought. This sac was then opened by gradually scratching through its wall with a blunt instrument, and about six ounces of black disintegrated fluid blood was evacuated. There was no pus, and the neck of the humerus could be readily felt

covered by periosteum. No bare bone could be detected, either on the humerus or scapula. After the cavity had been washed out, it continued to bleed very freely, necessitating the plugging of the wound. This checked the bleeding for the time, and the temperature fell and the urgent symptoms disappeared. But two days later, a sudden and serious hæmorrhage occurred, soaking through the dressings and into the bed. This was repeated on three occasions; but each time when I arrived the bleeding had almost ceased, or was quite easily checked by slight pressure or by injecting hot perchloride of mercury lotion.

On the last occasion, however, the patient was so blanched and in such a condition of syncope, and the amount lost was so large, that I decided to cut down upon the axillary region from in front if there was the slightest sign of any further hæmorrhage. To cut down through the inflamed and swollen tissues would have been most difficult and hazardous and, as the exact seat of the hæmorrhage was unknown, would probably have ended in failure. Fortunately, under pressure continued for twenty-four hours, there was no further bleeding, and the swelling, etc., soon subsided. The boy made an uninterrupted and complete recovery and was soon back at his work again; a most satisfactory termination to what threatened to be a very serious and difficult case.

The source of the hæmorrhage can only be conjectured, but the nature of the injury points rather to the tearing of some large vein near its junction with the axillary vein than to any arterial origin.

PAROTIDITIS WITH METASTATIC ORCHITIS.

BY W. G. CRESWELL, M.D. (DURHAM).

Although it is well known that specific parotitis is occasionally complicated by orchitis, yet the following case presents points of sufficient interest to warrant its publication.

J. C., a clerk aged 17, on November 6th complained of pain in the neck and difficulty in swallowing. The next day both sides of the neck were swollen. This condition increased in severity up till the 10th, on which day it improved somewhat suddenly and quickly. At the same time, however, he complained of an aching in the testicle. The next day he remained in bed, and was delirious and constantly vomiting. Three days previous (on the 8th) the bowels had been opened by the domestic exhibition of half an ounce of sulphate of magnesia.

I was called in to see the patient on the evening of the 12th, and found as follows:—Pulse 124 and very feeble, temperature 105°, pupils widely dilated and shewing no light reflex. The bed was very wet from involuntary passage of urine, and the patient had constant muttering delirium with pronounced subsultus tendinum. There was not any swelling of parotids, but the right testicle was red, hot, and swollen, and the patient was totally insensible to pain on pressure of the testicle. He had been constantly vomiting during the day, and in the early morning had received a second dose of half an ounce of salts, since the bowels had not been relieved since the previous clearing out on the 8th. There was a good deal of gurgling on pressure in the right iliac region, probably a result of the salts. He was ordered to take half an ounce of brandy every four hours, to have sinapisms to the nape of the neck and epigastrium, and to take frequently small quantities of soda-water and milk. In addition, he had a mixture of carbonate of ammonia, digitalis, and cinchona.

The next day the pulse and temperature had fallen to 100 and 102°. During the night he had been very restless and

delirious, and had involuntarily passed three or four motions. At my visit he was rather more sensible; but even while talking, relapsed into low delirium with subsultus. He complained of great pain in the head; the pupils were still widely dilated, and the vomiting had not ceased.

November 14th. The pulse had fallen to 54 and was exceedingly feeble. In all other respects the patient was much better. Temperature 98·6°.

November 15th. Patient still better; testicle reduced to nearly normal size.

November 19th. Quite well. Ordered to go to work as usual.

PERISCOPE.

GYNÆCOLOGY.

BY THOMAS WILSON, M.D., B.S. LOND., F.R.C.S. ENG.

On the Transmission of the Ovum from the Ovary to the Tube.—Lode first repeated the experiments of Kehrer and Pinner by injecting an emulsion of charcoal into the abdominal cavity of rabbits. After a few hours, particles of charcoal were found in the tubes. Next the ova of *Ascaris Lumbricalis suis* in emulsion were injected, and in twelve hours large numbers were found in the tubes. From his observations, Lode concludes that the fimbriated extremity of the tube need not be in contact with the ovary for the transmission of the ovum, and that external migration is certainly possible.—*Arch. für Gyn.* xlv., Ht. 2.

On the Etiology of Ectopic Gestation.—Dr. J. C. Webster suggests that any part of the lining membrane of the Müllerian duct may have a tendency to form decidual membrane, and

that if impregnation takes place above such part, the ovum may get stopped and tubal gestation thus arise. This suggestion does not explain the abdominal form, which is an improbable variety, nor the ovarian, which also is not satisfactorily established.—*Edin. Med. Journ.*, November, 1893, p. 402.

Deciduoma Malignum.—Gottschalk, in a paper on a case, states that there have been only eight cases recorded, of which seven were fatal. There is a growth at the placental site, appearing as isolated nodules, invading the deeper muscular layer, and shewing a richly vascular connective tissue stroma, in the interstices of which there are groups of large polymorphous epithelioid cells, coarsely granular in appearance. In the whole of the first seven cases there was rapid metastasis in the lungs, and the patient succumbed in less than nine months. The eighth case, the subject of this paper, was treated by total extirpation of the uterus, and the patient recovered from the operation.—*Berl. klin. Woch.*, No. 4, 1893.

Under the title of chorio-decidual tumour with malignant characters, Dr. A. Koettnitz describes the case of a tripara, aged 25, who, on July 25th, was naturally delivered. On August 28th, as there was continued bleeding, the uterus was dilated, and a placental polypus removed from the posterior wall close to the fundus. On September 18th the uterus was temporarily plugged, because of severe hæmorrhage; this was renewed next day. On the 21st another severe flooding; a tumour resembling a placental polypus, the size of a walnut, was removed from the posterior wall of the uterine cavity, and the uterus plugged with iodoform gauze. Afterwards fever (as high as 41° C.), delirium, coma, and death on the 10th of October. At the autopsy a fungous growth, larger than a pigeon's egg, was found on the posterior wall and fundus of the uterus, projecting like a mushroom into the cavity and invading almost the whole thickness of the wall. There were metastases the size of a cherry-stone in the wall of the uterus, the vagina, and the left broad ligament. In the lungs several hæmorrhagic infarcts were seen, in the centre of which were microscopic foci

of growth. The minute structure of the growths shewed that in its formation both decidual and placental elements were concerned.

Koettnitz concludes that if after abortion, or full-term delivery, flooding persists and increases, and if after clearing out the uterus other tumours grow in a very short time, and if the site of the tumour in the uterine wall is soft and so yielding that perforation seems probable, malignant chorio-decidual growth may be suspected, and total extirpation is indicated. If fever, with chills and rigors, cough, and fœtid discharge appear, the presence of embolic metastases and of hæmorrhagic infarcts in other organs is probable. If metastases are observed in the vagina or parametrium, the diagnosis is clear, but treatment hopeless—*Deutsche med. Woch.* xix., 21, 1893.

Cavernous Angioma of Uterus.—Boldt records a case of this affection in a multipara aged 37, who had been bleeding profusely more or less for nearly a year, curetting with sharp instruments having only a temporary effect. The mucous membrane shewed merely signs of hyperplastic endometritis under the microscope. The bleeding became so profuse that the uterus was removed by the vaginal operation, when a tumour the size of a walnut, with lobulated free surface projecting into the cavity, was found in the anterior wall reaching to the fundus. After a description of the histology of the angioma, the author refers to a case by Klob in his "Pathologische Anatomie der weiblichen Sexual-organe," p. 173, as the only other on record. In the latter case the tumour was supposed to originate from a placental site.—*Amer. Jour. Obst.*, December, 1893.

Ventrofixation for Retrodeviations of the Uterus.—Frommel was formerly in favour of shortening Douglas's folds, but finds that the good effects are not lasting, the folds elongating gradually, and allowing the uterus to resume its faulty position. He therefore now recommends ventrofixation in cases where there are strong adhesions, or where the displacement cannot be rectified by pessaries or vaginal operations. One case died

eleven days after operation, and the adhesions to the parietal peritoneum were found to be firm. Another of Frommel's cases conceived, went to term, and had a normal labour, the uterus retaining its normal position.—*Zeitsch. für Geb. und Gyn.*, xxvii., Ht. 2.

Myoma of Urethra.—Büttner records a case of a myomatous polyp the size of a hen's egg protruding from the vulva, and attached to the anterior wall of the urethra close to the meatus, in a sterile married woman aged 40. The swelling had grown rapidly in the month during which it had protruded from the urethra, and it caused incontinence of urine and much suffering. The tumour was easily enucleated by Ahlfeld with scarcely any loss of blood.—*Zeitsch. f. Geb. u. Gyn.*, xxviii., 1, 1894.

Urethral Stricture in Women.—Loubeau describes a case of complete cicatricial stricture in a patient aged 52, who five years previously had a urethral caruncle removed, the wound being touched with the actual cautery. The bladder was greatly distended. The stricture was cured by incision with a bistoury, hæmorrhage being controlled by tampons; a bougie was ordered to be passed regularly.—*Arch. de Toc. et Gyn.*, Apl., 1893.

Genouville, in a paper on this subject, points out that the two chief causes are gonorrhœa and traumatism. The symptoms vary from slight difficulty in micturition to complete retention, and they occur earlier than in the male, because the muscular coat of the bladder is thinner. Cystitis and pyelo-nephritis may occur. The treatment usually employed is gradual dilatation, but "total urethrotomy" gives a better chance of complete cure.—*Arch. de Toc.*, May, 1893.

Kleinwächter describes three cases. One of these was due to damage during labour, and another, which occurred in a patient aged 56, is described as a case of what Herman has called senile stricture, the present being the ninth recorded case. The other was a tight and extensive stricture in a multipara aged 53, whose youngest child was ten years old, and in whom symptoms had existed for seven years. According to Kleinwächter gonorrhœa is the commonest cause of stricture in the female as in the male urethra.—*Zeitsch. f. Geb. u. Gyn.*, xxviii., 1, 1894.

Gonorrhœa in the Female. — Bröse remarks that simple microscopical examination of the secretions is not sufficient, because although the presence of gonococci is conclusive, their absence does not prove the secretion non-specific. In a suspected case the only certain method is to make cultures of the suspected discharge. Bröse believes in the curability of gonorrhœa, but says that the fact of cure can only be demonstrated by the endoscope and repeated examination of the urine. Latent gonorrhœa is a myth; in every case of suspected infection of a woman by her husband, the latter shewed some pathological remnant, such as circumscribed or diffused urethritis, strictures, abnormal secretions, rarely gonococci. One attack of gonorrhœa predisposes to further attacks. Gonorrhœal affections of the uterus are very frequent. Every cervical catarrh, especially in a multipara, should arouse suspicion; most so-called puerperal catarrhs are of this nature. Fluor albus of virgins is also often of this nature; but this does not of necessity indicate impure intercourse, for there are many other means of entrance for the gonococcus. The husband should be examined in every case of fluor albus. A history of ophthalmia neonatorum, urethritis, and vulvitis, and changes in the glands of Bartholin and their ducts all are suggestive of gonorrhœa. So also are inflammatory affections of joints and disease of the adnexa, with leucorrhœa. Prophylaxis should include careful endoscopic examination with, in addition, careful examination of the urine in every man before he is pronounced cured. Most prostitutes suffer from chronic gonorrhœa, and their regular inspection is insufficient. The treatment of gonorrhœa in the female is described at length; in the acute stage, simple antiseptic or astringent vaginal injections; in urethritis, injections of one to five per cent. nitrate of silver solution. About four weeks after onset of acute symptoms, energetic local treatment is carried out by the application of strong chloride of zinc solution to cervix. The body of the uterus does not require treatment, unless affection of it is suggested by disease of the tubes and repeated miscarriages. If affected, medicated bougies or appli-

cations of Playfair's probes are recommended; curetting and intra-uterine irrigation are very hazardous. The treatment of diseased adnexa will be fully gone into at a future time.—*Zeitsch. f. Geb. u. Gyn.*, xxvi., Ht. 1.

Carry found the gonococcus—which he insists upon as being absolutely specific—in only one-third of a large number of prostitutes and other fallen women suffering from vaginal discharge. In four out of five cases its seat was the urethra; in one in five, the cervix. It was, exceptionally, found elsewhere. Gonorrhœal urethritis of women, often unattended by symptoms, is the almost exclusive source of gonorrhœa in man.—*Lyon Méd.*, January 28th, 1894.

Laser examined 600 prostitutes. Out of 353 whose urethrae were examined, gonococci were found in 112, though in four-fifths of these there was no macroscopical evidence of gonorrhœa. In only 7 out of 180 cases examined were gonococci found in the vagina. With regard to the reputed sterility of this class, out of 44 who were specially questioned, 26 had had one to nine children.—*Deutsch. Med. Woch.*, No. 37, 1893.

Tuberculosis of the Female Genital Organs.—Dr. J. W. Williams has observed tuberculous affections seven times in parts removed by operation, and twice in *post mortem* examinations, and on these and a review of the literature of the subject concludes that genital tuberculosis may occur at any age, though it is most frequent from 20 to 40. It is usually secondary to tuberculosis of other parts, but is primary in a considerable number of cases, more at any rate than is generally recognised. In the microscopic examination of all extirpated tubes and ovaries tubercle was often found, when macroscopic examination had not suggested its presence. Eight per cent. of the appendages removed for inflammatory affections are tuberculous; of these 75 per cent. were only recognised to be so after examination by the microscope. Tubercle may attack any part of the genital tract in the following order of frequency—tubes, uterus, ovaries, vagina, cervix, vulva. Tuberculosis of the cervix is more frequent than is supposed, and is easily confounded with

MEDICAL DEPARTMENT OF THE NAVY.

ADMIRALTY,

NORTHUMBERLAND AVENUE, W.C.

8th February, 1894.

An Examination for fifteen Commissions in the Medical Department of the Royal Navy will be held in Examination Hall, Thames Embankment, on Monday, 7th May, 1894, and following days.

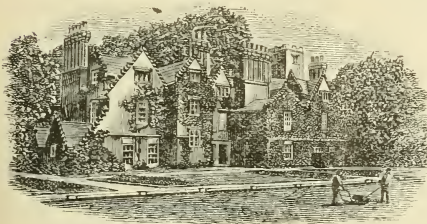
The forms to be filled up by Candidates will be supplied on application to this Department.

J. N. DICK,

Medical Director General.

THE MOAT HOUSE, TAMWORTH, STAFFORDSHIRE.

STATIONS L. & N. WEST, and MID. RAILWAYS.



The House stands in grounds of ten acres (within 5 minutes' drive of either station), and is devoted to the care and treatment of a few Ladies suffering from nervous and mental disorders, who enjoy the comforts, privacy and occupations of home life. Voluntary patients are received without certificates.

Resident Proprietors—J F. WOODY, M.R.C.S., and E. HOLLINS, M.A.Camb.
Medical Attendants—J. HOLMES JOY, M.A., M.D., and S. H. HARRISON, L.R.C.P. Lond.
both of whom reside close to the gates.

FOR TERMS, ETC., APPLY TO PROPRIETORS.



cancer. Tubercle of the tubes and uterus is usually confined to the mucous membrane, and occurs in three forms, as miliary tubercle, chronic diffuse tubercle, and as chronic fibroid tubercle ; of these the second form is the most common.

Genital tuberculosis may be caused by external infection ; infection by coitus is very probable, but not proved. Most cases are secondary to tubercle elsewhere, and are due to infection through the blood or from neighbouring organs. The symptoms of tuberculosis of the uterus and of the appendages are not characteristic. The diagnosis in primary cases can only be made by the presence of tubercle bacilli in the secretions. Thickening of the tubes and ovaries in cases of phthisis or tubercular peritonitis is always suspicious. Prophylaxis consists in cleanliness and in the prohibition of coitus between persons of whom one has a tubercular affection of the genito-urinary tract. The curative treatment of ulcerations of the vulva, vagina, or cervix, consists in the application of tincture of iodine or iodoform, or in excision. In tuberculosis of the uterus curetting followed by dressing with iodoform ; in cases where recurrence takes place, vaginal extirpation. Tuberculous tubes and ovaries should be removed by laparotomy, unless this is precluded by the general condition of the patient ; tubercular peritonitis and incipient phthisis do not contra-indicate.—*Reports of the Johns Hopkins Hosp.*

Meyer observed a case of tuberculosis of the cervix in a woman who had had three children, of whom one died of meningitis, and the others did not live twelve months. The patient had lupus on the cheek treated by scraping fifteen years previously. For six years there had been metrorrhagia with free discharge between the periods ; a bright red patch, not bleeding on examination, was present on the cervix, and this proved to be tuberculous when examined after removal.—*Arch. für Gyn.*, xlv., iii., 1894.

The So-called Conservative Operations on the Ovary, Tube, and Uterus.—A. Martin has performed resection of one ovary after extirpation of the other, or several punctures of dropsical

or hæmorrhagic follicles, in 27 cases. Out of 24 of these, 8 later became pregnant. Where disease has totally destroyed the ovarian tissue which is capable of carrying on the function of the organ, and especially where there is a purulent process, extirpation of the entire ovary is indicated. But in the small number of cases in which there is a chronic oöphoritis and a circumscribed new formation, Martin prefers partial resection. The resection of the occluded tube after extirpation of the other oviduct for disease, was carried out in 40 cases; one woman afterwards conceived. Finally, in 141 enucleations of intra-parietal myoma of the body of the uterus, 26 women died. Of the 115 survivors, 5 were again affected by myoma and 2 conceived.

Martin points out that these conservative procedures are not more dangerous than the radical operation; that the women become and remain relieved from their complaints in the very great majority of cases; that relapse, or diseases of the resected organs, are the exception; that the women preserve their sexual functions; that pregnancy remains possible; and, finally, that labour takes place without any particular danger. He asks, therefore, if the success of these operations does not impose the duty of practising them in suitable cases, in which the operator has no right to deprive the patient irretrievably of her functions.—*Deutsch. Med. Woch.*, xix., 30, 1893.

On the Relation of Pelvic Disease and Psychical disturbances in Women.—At the sixth annual meeting of the American Association of Obstetricians and Gynæcologists, held at Detroit in June, 1893, Dr. George H. Rohé read a paper on this subject and summarised the results of 20 operations for the removal of the appendages in insane women with pelvic disease. There were 18 recoveries from the operation, and 2 deaths; 4 absolute mental recoveries; 3 with partial mental recovery; 7 with decided mental improvement; 3 mentally in *statu quo*; 1 reported worse.—*Amer Jour. Obst.*, September, 1893.

In a powerful paper Dr. A. Church discussed the question of removal of the appendages in the insane and neurotic, criticising

particularly the above series of operations and their results. He emphatically condemns the operation, except in rare and well-selected cases where there is some gross lesion of the uterine adnexa, and finishes by quoting, in support of his position, Dr. Goodell (of Philadelphia), Playfair, and Spencer Wells.—*Amer. Jour. Obst.*, October, 1893.

REPORTS OF SOCIETIES.

BRITISH MEDICAL ASSOCIATION.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

The sixth meeting of the Session 1893-4 was held on Thursday, March 8th, the President, Dr. RICKARDS, in the chair.

Nominations of officers and members of the Council were received. The following were elected members of the branch: W. H. Packer, L.R.C.P., Cressage, J. A. Codd, M.B., Wolverhampton, F. J. Dixon, M.B., Birmingham, R. C. Tweedy, M.R.C.S., Kenilworth.

Dr. Kauffmann reported as follows on the specimen shewn by Mr. Lawson Tait at the last meeting:—

“The stone is a fæcal concretion round a thick brass pin. One mass of tissue consists of vermiform appendix and Fallopian tube intimately adherent from chronic inflammation. Another mass of tissue is a portion of Fallopian tube. A third mass is structurally cicatricial and no further detail can be ascertained about it.”

Extensive destruction (Syphilitic) of Soft Palate.—Mr. F. Marsh showed a young man, nearly the whole of whose soft palate had been destroyed by syphilitic ulceration. The parts had been firmly cicatrised for some months, but the man was unable to obtain any employment on account of the extreme nasal character

of his voice. This defect had been entirely remedied by an "obturator" which had been made for him at the Dental Hospital by Mr. A. E. Donagan, Hon. Dental Surgeon to the Hospital. The patient was shewn chiefly to demonstrate the great advantages to be derived from a well-fitting obturator in this class of case.

Dr. Foxwell read a paper on the Antiseptic Treatment of Tubercular Phthisis.

Mr. Barling read a paper, mainly statistical, on operations for stone in young male subjects.

PATHOLOGICAL AND CLINICAL SECTION.

The fourth meeting was held on Friday, February 23rd, 1894, at eight o'clock, Mr. F. MARSH being in the chair.

Adenoma Sebaceum.—Dr. Leslie Phillips presented a case of adenoma sebaceum in a youth of 19. The disease appeared when he was eight years old, is symmetrically placed in the usual position, and the papules are accompanied with telangiectases. On the brow are two small fibromata. The patient is spare in build, intellectually inferior, and subject to vertigo.

Mr. Morrison shewed a boy on whom he had successfully operated for very advanced double talipes equinus.

Mr. Haslam shewed a specimen illustrating the conditions seen in an old-standing case of talipes equinus.

Specimens.—Dr. Douglas Stanley shewed the following specimens:—No. 1. Intestine shewing a perforation in the cæcum about one inch from the ileo-cæcal valve. This leads into a sinus, which extended for about five inches up behind the ascending colon, and in which was a considerable amount of pus and faecal matter. The perforation seems to have originated in a cæcal ulceration. There was a history of sudden severe pain in the right iliac region, with rise of temperature, six months previous to the patient's death from pneumonia. In the interval he appeared quite well. No. 2. Intestine shewing

extreme typhoid ulceration, the lower seven feet of the ileum being involved; there was extensive perforation. The patient was at work a week before his death.

Mr. Lucas shewed an appendix, with fæcal concretions, from a man aged 41. Vomiting had existed for eight days, and there was almost complete obstruction of the bowels. The abdomen was opened with a view to relieve the obstruction, but the patient died before the operation could be completed. The *post mortem* examination shewed old-standing disease of heart, lungs, and liver, and a patch of congestion at the upper part of the small intestine, as if this had been a volvulus.

Fibrosis.—Dr. Foxwell shewed the heart, left lung, and liver from a single woman of 32. The liver was much enlarged and very tough, exhibiting fibrosis around the branches of the portal as well as around those of the hepatic vein. The lung was very dense in structure throughout, but the pleura had evidently been the chief starting-point of the fibrosis. There was no bronchiectasis worthy of the name; and Dr. Foxwell remarked that, in his experience, fibrosis of lung arising from pleural disease was accompanied by far less dilatation of bronchi than was that occurring in primary lung disease. The mitral valve was an excellent example of the button-hole variety of stenosis. It was not a straight slit, but a semicircular crescent; the crescentic shape was characteristic of this morbid condition. There was much calcareous infiltration of the valve segments.

Case of Rupture of Mucous Membrane of Stomach.—Mr. Clayton read notes of this case that had been under his care. H. L., youth 16 years of age, admitted into Queen's Hospital at 11.30 a.m. January 4th, having been caught between the buffers of some railway trucks. On admission, marked collapse; no sign of injury, but tenderness over region of stomach. Two hours after admission he vomited one pint of partially digested blood. Three hours later he vomited a half-pint of altered blood. Marked tenderness on palpation. Pulse 84, respirations 40 and chiefly thoracic, temperature 99.6°. At 11.30 p.m., his condition being worse and the abdomen shewing

signs of distension, the abdomen was opened. The only injury found was slight laceration of the spleen, from which blood flowed freely. This hæmorrhage was stopped by mopping the lacerated surface with a mixture of iodoform and Friar's balsam. In the morning of January 5th the boy's condition shewed improvement, but during the evening the abdominal tenderness increased and the temperature rose to 104.6° . At 8.30 p.m. the temperature suddenly fell to 87.8° , and the boy died in an hour. *Post mortem* shewed two linear lacerations of the spleen and two stellate lacerations of the mucous membrane of the stomach, the one on the anterior wall, an inch in diameter and involving only the mucosa, the other on the posterior wall and resembling that on the anterior. No other injury, except traces of some previous abdominal injury. Organs all healthy.

MIDLAND MEDICAL SOCIETY.

The sixth ordinary meeting of this Society was held on Wednesday evening, February 21st, the President, Mr. A. H. EVANS, in the chair.

Extensive Ulceration of the Colon as a sequel of Typhoid Fever.
—Dr. Carter shewed the colon of a married woman, æt. 27, who had been attacked with typhoid fever. For the first month the case was regarded as perfectly typical in every respect, and ran the usual course without serious symptoms. But at this point the process of recovery was checked, and the patient began to exhibit signs of more or less marked colitis. Various kinds of treatment were adopted, but with very partial relief; and two months later (three months from onset) she died from intercurrent broncho-pneumonia. The colon was deeply and extensively ulcerated from cæcum to anus.

Mr. Christopher Martin shewed a child enveloped in the unruptured bag of membranes. The patient had had several children previously all born normally. The first stage of labour

lasted about forty-eight hours, and was followed by a rapid second stage. Dr. Malcomson, the medical attendant, was not sent for until labour was over. He found on his arrival that the whole uterine contents had been passed *en bloc*; the child was dead and enveloped in the unruptured bag of membranes together with the placenta. The child, a fœtus of between six and seven months, when first born was living and could be seen struggling for breath, but the woman in attendance had not the sense to rupture the membranes. There was no *post partum* hæmorrhage.

Mr. Chavasse shewed a patient, a miner aged 29, with a large popliteal aneurism extending into the right calf. There was no history of injury or syphilis, but extensive aortic disease was co-existent.

Mr. Chavasse also shewed a dissected left leg taken from a man aged 54, who suffered from traumatic aneurism of the peroneal artery, the result of a fractured fibula untreated for a month. The aneurism was opened and the artery secured. Seventeen days afterwards attacks of secondary hæmorrhage and suppuration of the sac, the arteries being very brittle, necessitated Stephen Smith's amputation being performed. The dissection shewed an abnormally large peroneal artery taking the place of the anterior tibial at the lower third of the leg and forming the dorsalis pedis. Both the posterior and anterior tibial arteries were very small.

Mr. John W. Taylor shewed a specimen of omentum removed from a case of ovariectomy. The omentum was largely adherent to the cyst and had become in many places fenestrated by the growth of the tumour. As the omentum in this condition might readily have proved a subsequent cause of intestinal strangulation, a large portion weighing 15 ounces was removed *en masse*. The ovarian tumour was of unusual size and weighed nearly 96 lbs. The pedicle was twisted. The patient is now convalescent.

Mr. Taylor also shewed two specimens removed from cases of hysterectomy performed by the method described by him at the British Gynæcological Society in December, 1893.

Mr. J. W. Taylor read a paper on Highlying Pyosalpynx concealed by Retroversion of the Uterus. A small group of cases existed in which displacement of the uterus is followed by sudden and unexpected peritonitis. He narrated a case in point, giving its history, the condition found (*a*) before operation, (*b*) at the time of operation, and the treatment necessary. Two difficulties existed occasionally in pelvic diagnosis. He laid stress on the importance of a comprehensive study of disease and the importance of symptoms.

A meeting of the Midland Medical Society was held on Wednesday, March 7th, the President, Mr. A. H. EVANS, in the chair.

Mr. Haslam shewed a specimen of a fibrous growth that he had removed from the cervical vertebræ of a boy aged 14. Symptoms of pressure on the brachial plexus had existed for two years, and the tumour was too widely attached to permit of complete removal.

Thyroidectomy for Parenchymatous Goitre. — Mr. Barling shewed a patient, aged 17, from whom he had removed the right lobe and the isthmus of the thyroid for the relief of pressure symptoms. The goitre had existed for six years, slowly enlarging, but increasing rapidly since pneumonia six months ago. For a year the patient had been short of breath on exertion, and twice recently had suffered from severe attacks of dyspnoea which threatened to end fatally. On admission there was slight stridor only, but on walking up a few steps on one occasion into the ward he had a sharp attack of dyspnoea. The whole thyroid, but especially the right lobe, was enlarged, and to the left of the middle of the isthmus a deep notch in the tissue was noticed.

The operation presented nothing unusual, and a good recovery followed. The deformity of the trachea was not the usual lateral flattening, but mainly an antero-posterior one due to the tying down of the isthmus by the left sterno-hyoid and thyroid muscles.

At the present time, three weeks after the operation, the stridor remains the same, but the patient feels greatly relieved in his breathing. His neck measures an inch and a half less in circumference than it did.

Dr. T. Sydney Short read a paper on "The Clinical Aspects of the later stages of Gout, Rheumatism, and Rheumatoid Arthritis," which will be published elsewhere.

KIDDERMINSTER MEDICAL SOCIETY.

Meeting held at the Kidderminster Infirmary on 23rd February, 1894, at 8 p.m., Mr. SAMUEL STRETTON, President, in the chair.

Mr. J. L. Stretton shewed a case in which he had operated for an abscess in the lumbar region, and later on, as pus and blood were found in the urine, explored the kidney without result. Subsequently a patch of caries was discovered on the side of the body of one of the mid-dorsal vertebræ; this was scraped, and the patient is now quite strong and able to follow his occupation as a gardener. There is still a trace of albumen in the urine.

Dr. Evans shewed a case in which he had removed the upper epiphysis of the left thigh bone. Fibrous union had taken place and allowed free movement; there was only an inch shortening and the girl could walk comfortably.

Dr. W. H. Moore shewed a case of Enchondroma situated behind the angle of the jaw on the right side; it had existed for six years and caused considerable deformity.

Specimens.—Dr. Evans, 1, Acute Epiphysitis; 2, Malignant Pylorus, annular stricture.

Mr. P. E. Davies, Tubercle Bacilli from a case of phthisis.

Mr. J. Lionel Stretton read a paper on "Amputation following Injury."

REVIEWS.

WOMEN : THEIR PROBABLE PLACE AND PROSPECTS
IN THE TWENTIETH CENTURY.*

WE have read this address with admiration for the courage which prompted its delivery before a mixed audience such as the Scottish Society of Literature and Art. We fear, however, that the author will be looked upon as hopelessly behind the times by those who hold the more modern views concerning the place and prospects of women in the twentieth century.

Sir Dyce Duckworth claims that the experience arising from a long period of practice in the medical profession renders its owner peculiarly well fitted to form an opinion on this matter. Briefly, he takes up the position that the fixed sexual differences between women and men make it impossible for the former to expose themselves to the training and influences suitable to the latter, without materially and disastrously affecting the welfare and happiness of the human race. Speaking as a physician, he maintains that the physical strength and energy of all but exceptional married women find ample scope for their exercise in the household and family work which can be efficiently performed by none other than themselves, and asks where are the "wonderful women" who, after properly discharging those duties, can yet find time and energy to compete with men in the pursuit of business or public work? To those who are without such duties, or who find them insufficient, he would advise the adoption of interesting and suitable outside work, but would avoid politics, public work of most descriptions, the professions, and above all that of medicine, as being unsuited to the very nature of the female sex.

* Women : Their Probable Place and Prospects in the Twentieth Century. By Sir Dyce Duckworth, M.D., LL.D. ; Physician to and Lecturer on Medicine in St. Bartholomew's Hospital. Glasgow : James Maclehose and Sons. 1894.

Whether Sir Dyce Duckworth does not in some of these points go somewhat too far, especially, perhaps, in his views as to the university education of women, we may, perhaps, doubt; but, in any case, we can safely recommend the perusal of his address as an interesting and admirably composed discussion of an important subject, coming from one who is well qualified to form an opinion on the questions involved.

THREE TEXT-BOOKS.*

ANYONE who has the courage to read through the "Aids" to Otology and the Diagnosis and Treatment of Diseases of Children, will certainly have no cause to complain of the amount of information supplied when compared with the space into which it is compressed; but the unattractive appearance of the books, their small print, and the almost catalogue-like style in which they are written, will, we think, deter many from making the attempt, unless under the fear of an immediate examination. This is the more to be regretted in the case of the Aids to Otology, in that it deals with a branch of medicine the study of which is far too much neglected both by students and practitioners, and undoubtedly, considering its size and aim, contains a very fair summary of its subject. Indeed, for purposes of reference, we can recommend it to those who do not consider it worth their while to read a book which goes more deeply into the matter.

In the Diseases of Children, Dr. McCaw has made the best of a bad bargain, and has summarised his subject as well as the nature of the work will allow, but the inadequacy of its treatment

* Aids to Otology. By W. R. H. Stewart, F.R.C.S.E. London: Baillière, Tindall, and Cox.

Aids to the Diagnosis and Treatment of Diseases of Children (medical). By John McCaw, M.D. London: Baillière, Tindall, and Cox.

Essentials of Practice of Medicine. By Henry Morris, M.D. Philadelphia: W. B. Saunders. 1894.

throughout is well exemplified by the fact that the whole subject of diet is compressed into six small pages, in which no special attention whatever is devoted to its modifications in disease. With so many really excellent and comparatively short books on Diseases of Children already published we cannot think that this addition to the list has much beyond its small price to recommend it.

Dr. Morris' Essentials of Practice of Medicine has, for a novelty, its arrangement in the form of question and answer, and is a good specimen of its sort. We do not think, however, that anyone who adopts this method of learning will gain an intelligent knowledge of his subject thereby; and we cannot therefore recommend it to the medical student, however tempting it may appear from the point of view of preparation for the *viva voce* part of an examination.

AN INTRODUCTION TO MIDWIFERY.*

THIS little book is only "intended to serve as a handbook for medical students beginning the practice of midwifery, and for midwives;" and if any students are compelled to attend midwifery cases without having previously studied the subject, it will be of great help to them.

The book is written clearly and accurately. At the same time we think that special stress should have been laid upon the more important points. To give one example—the evils resulting from traction on the cord in the third stage are not really emphasised, in fact hardly mentioned. That absolute cleanliness and asepsis in midwifery are as important as in general surgery and as productive of good results, is pointed out

* An Introduction to Midwifery. By Archibald Donald, M.A., M.D., C.M. Edin., Surgeon to St. Mary's Hospital for Women and Children, Manchester. Published by Charles Griffin and Co.

clearly. We only wish that the author had advised the use of iodine which is a most handy and efficient antiseptic.

Although we fully recognise the merits of this book we do not think that it is sufficient for students; we think that they ought to learn more before attending midwifery cases. For midwives we can heartily recommend it, and a careful study of it would diminish the number of accidents that happen during confinements.

INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY.

WE have received the following, with a request for its publication, from Dr. C. Müller, Secretary-General of the Eighth International Congress of Hygiene and Demography, to be held at Budapest from the 1st to the 9th of September of this year :—

“The preliminary arrangements of the Congress are already far advanced.

“The interest which foreign countries take in it is best shewn by the great number of eminent scientists who have already promised papers and who will lecture before the various sections. There are 362 hygienists and 78 demographers already inscribed, who will read 440 papers; but these are only the foreign scientists who have up to this moment—that is, six months before the opening of the Congress—sent in their adhesions.

“The number of the sections has been increased by one, the Samaritan having joined our own Congress. The 20th Section has been constituted under the title, ‘General Samaritan Affairs.’ This section will treat and finally decide all the important questions falling within its sphere—that is to say, the organisation of this great and important international affair will be initiated by them.

"The interest of the Congress will be enhanced by the circumstance that the Medical Officers of the German railways and the cremation societies will hold their meetings at Budapest in connection with it.

"Many town corporations, universities, and eminent societies have already nominated their delegates.

"The Congress will be opened by His Imperial and Royal Highness the Archduke Charles Louis. The introductory meeting will take place in the building and garden of the National Museum, the classic ground of our metropolis. The Corporation of the metropolis will arrange a splendid soirée at the halls of their Redoute for the reception of the Congress.

"The 6th of September is reserved for minor excursions, such as the inspection of public institutions and edifices, a trip to Balatonfüred, Siófok, and, by invitation of Count Nicolas Eszterházy, to Totis; also excursions to the Széchenyi-berg, the Island of St. Margherite, etc.

"The arrangements for the excursions to be made after the closing of the Congress have been enlarged, so that besides a voyage to Constantinople and Belgrad, excursions to Tátrafüred, Agram-Fiume, and to Bosnia and the Herzegovina have been added to the programme."

PUBLISHERS' DEPARTMENT.

New Inventions, Drugs, etc.

We have received from MESSRS. THOMAS CHRISTY & CO. samples of the following drugs prepared by Messrs. Frederick Stearns and Co., of Detroit, U.S.A. :—*Wine of Cod Liver Oil with Peptonate of Iron*, which is said to contain all the active constituents of Cod Liver Oil without the fatty matter. We can testify that the taste of the oil is almost completely hidden by that of the wine, but doubt whether the elimination of all the

fat can be looked upon entirely as a recommendation. It is, however, a very palatable preparation.—*Cascara Aromatic* is a preparation of *Cascara Sagrada*, which also has as its aim to mask the bitter taste of the drug. We think that the attempt has been successfully made, and that the preparation would be eminently suitable for administration to children.—*Dike's Pepsin* is prepared in such a way that the mucus is from the beginning of the process of manufacture separated from the secretion of the peptic glands; and it is therefore claimed that it is a purer form of pepsin than the other preparations in the market. It is of fixed strength, namely, 1 in 3000.

THE LIQUOR CARNIS CO LIM. send us a sample box containing eighteen *Carnis Suppositories*. These Suppositories are made from raw beef juice; and whilst remaining unmelted when exposed to a moderate degree of dry heat, become liquefied in the presence of moisture at a temperature of 91.4° to 93.2° F. They are therefore readily absorbed in the rectum, but can be kept for a long time exposed to the air without undergoing any change.

New Books, etc., Received.

Outlines of Gynæcological Diagnosis. By N. T. BREWIS, M.B., C.M., F.R.C.P.E., Lecturer on Gynæcology, Edinburgh School of Medicine. Edinburgh: William F. Clay. 1894.

Normal Labour, as conducted in the Frauen Universitat Klinik, Berlin. By MOFFAT FLYNN, F.R.C.S., Surgeon to the South London Hospital. Leicester: John Richardson and Co Limited.

Cases to illustrate the Relationship which exists between Wryneck and Congenital Hæmatoma of the Sterno-mastoid Muscle. By D'ARCY POWER, M.A., M.B. Oxon, F.R.C.S. Eng; Demonstrator of Surgery at St. Bartholomew's Hospital. London: Adlard and Son 1894.

Congenital Affections of the Heart. By GEORGE CARPENTER, M.D. Lond., M.R.C.P.; Senior Physician to Out-patients at the Evelina Hospital for Sick Children. London: John Bale and Sons. 1894.

Modern Homœopathy, its Absurdities and Inconsistencies. By WILLIAM W. BROWNING, A.B., LL.B., M.D.: Lecturer upon and Demonstrator of Anatomy, Long Island College Hospital. Philadelphia: Wm. Fell and Co. 1894.

Note on Bier's New Method of Treating Strumous Diseases of the Extremities by Passive Congestion. By A. G. MILLER, F.R.C.S.E., Surgeon to the Edinburgh Royal Infirmary.

Clinical Manual for the Study of Diseases of the Throat. By JAMES WALKER DOWNIE, M.B., Fellow and Examiner in Aural Surgery for the Fellowship of the Faculty of Physicians and Surgeons Glasgow, etc. Glasgow: James Macle hose and Sons. 1894.

The Rectum and Anus: Their Diseases and Treatment. By CHARLES B. BALL, M.Ch. Univ. Dub., F.R.C.S.I.: Surgeon to Sir Patrick Dun's and Simson's Hospitals. Second Edition. London. Paris, and Melbourne: Cassell and Company Limited. 1894.

Sarcoma of the Kidney; its Operative Treatment. By ROBERT ABBE, M.D., Surgeon to St. Luke's Hospital, New York.

The Surgery of the Hand. By ROBERT ABBE, M.D., Surgeon to St. Luke's Hospital, New York.

Lectures on Genito-urinary Diseases. By J. C. OGILVIE WILL, M.D., C.M., F.R.S.E.; Consulting Surgeon to the Aberdeen Royal Infirmary. London: The Scientific Press Limited. 1894.

Burdett's Hospital and Charities Annual. 1894. London: The Scientific Press Limited.

Science Progress: A Monthly Review of Current Scientific Investigation. Vol. I., No. 1. London: The Scientific Press Limited.

* * * Authors can have reprints of articles at the following rates:—

Not exceeding 8 pages	...	8/-	per 100
„ 16 „	...	12/6	„

The re-arranging of the type is the principal cost in the production of these reprints, so that smaller numbers will be the same price. Larger numbers at a proportionate reduction.

The Subscription (prepaid) to the *Birmingham Medical Review* is 6s. per annum, post free.

NOTICE.—All Communications should be addressed to the Printers and Publishers, Messrs. Hall and English, 71, High Street, Birmingham.

THE
BIRMINGHAM MEDICAL REVIEW.

MAY, 1894.

ORIGINAL COMMUNICATIONS.

THE INGLEBY LECTURES, 1894 *

ON THE COMMON FORMS OF DYSPEPSIA
IN WOMEN.

BY ROBERT SAUNDBY, M.D. EDIN., F.R.C.P. LOND.
PROFESSOR OF MEDICINE, MASON COLLEGE.
PHYSICIAN TO THE BIRMINGHAM GENERAL HOSPITAL.

LECTURE II.

IN every age the means used for the treatment of disease have corresponded to the general current of popular contemporary ideas, and have been only superficially influenced by the progress of the exact sciences. Thus the popular imagination, always dominated by the notion of the unknown, has constantly placed its faith in mysteries, the outward form of which has varied, but their essence remains the same. Whether it be a dried toad, or a saint's bone, or the water from a holy spring, or an electrical belt or towel, or a vegetable heal-all of Transatlantic origin, it is its unknown unfamiliar character and mode of action which favourably impresses the popular mind, and for a time endows it with marvellous virtues. So far as the use of such means is confined to quacks, they do not greatly

* Delivered at Mason College, March 15th and 22nd, 1894.

interfere with the progress of regular therapeutics ; but, unfortunately, the modern development of commercial enterprise has made our profession a great field for the exploitation of the nostrum vendor, and we are being overwhelmed with new remedies, of which not one in a hundred has any virtue but its novelty ; yet, under pressure of the popular demand, they too often oust long-tried and efficient preparations, to the injury of sound therapeutics and the degradation of the profession. We declaim against quacks and their remedies, yet we know that the fashionable doctor is the man who prescribes every new drug ; and we see even teachers of materia medica struggling who shall be first to associate his name not with a successful means of treatment, but with the introduction of a new drug. No doubt the treatment of disease is an art which has its necessities, and cannot wait for a scientific basis for all it does ; but our hospitals afford a great field for experiments with drugs, and should be the sources from which the profession should obtain trustworthy information as to new or improved methods of treatment, and the use of novelties as such should be left to quacks. The best rule to follow is to continue to employ well-tried remedies which yield satisfactory results, and to experiment cautiously with new drugs which promise to extend our powers of usefulness, and with these only. As our knowledge of pathology advances, we acquire a clearer knowledge of what we may reasonably expect from drugs and how to direct our treatment, and if we are wise, we shall limit our experiments to those fields in which we possess some such guiding light.

In the preceding lecture I have endeavoured to lay clearly before you the true causes and nature of the groups of symptoms which constitute common forms of dyspepsia in women, so that it becomes easy to explain the second part of my subject—that is, the treatment which they demand and by which they may be successfully encountered.

It is an old maxim that prevention is better than cure, and preventive medicine has in these days received high and due recognition from our governing bodies, and is performing a

most important and beneficent function. But there are many diseases which depend to a great extent upon social causes, the roots of which lie too deep to have been touched at present by our legislators. Of these our present group is an instance, depending as it does upon the unsatisfactory position of women, especially in the poorer classes. Is the life of drudgery which is the lot of so many of them inevitable? This is a question which cannot be discussed at length here. But some of the causes are not irremovable; for example, early improvident marriages, drunkenness on the part of husbands, too large families, want of economy and method in the management of money, time, and labour; want of consideration on the part of those who are set over them—husbands, masters, and mistresses—the employment of married women and mothers of families in factories. One of the most philanthropic of our local manufacturers, who employs a large number of women—I allude to Mr. Cadbury—I understand refuses to keep them after they marry; and this wise rule has the good effect of discouraging early and improvident unions, while it impresses upon the people the important truth that a married woman's work should be the care of her home and children, whatever her station in life. The value of this rule is brought home to us in connection with this group of diseases as met with among women of the richer classes, for it is especially in those over-active excitable women, who are always doing so much—that is, finding occupation and excitement away from their homes—that these troubles are commonly met with. I do not wish to say a word in disparagement of the many useful spheres in which women's activity has shewn itself in modern times, but most of us have certain limits to our capacity for work, outside which our health suffers, and inside which it is our duty to confine ourselves; and I believe this obvious truth is too often disregarded by very estimable women, with the result that their usefulness is impaired and the happiness of their homes compromised.

REST.

Exhaustion from over-taxing the physical and mental powers, or from other causes, being the basis of these troubles, we have no difficulty in naming the essential remedy, which is rest—rest in bed.

It is a very simple means, so simple that it is frequently not acceptable to an active-minded woman who wants to be always doing something, and who feels disgusted with advice which is the very opposite of what she desires. But this must not deter us from insisting firmly on this as the foundation for all other treatment. Drugs may and do alleviate the symptoms in the earlier stages of the disease, but the patient does not get well, the mischief goes on, and in course of time serious troubles develop which are more difficult to cure.

The duration of the period of rest must necessarily depend upon the intensity and duration of the symptoms. Such virtue is there in prolonged sleep and rest that even thirty-six hours in bed will do much in the early stage of this neurosis, but when our advice is sought it is usually for a condition of things which demands at least a week, and commonly two or three weeks' rest. The rule is to keep the patient in bed until she has eaten ordinary diet without any discomfort for at least three or four days.

When the patient is first put to bed only milk and bread should be allowed. If there is vomiting, only milk, one ounce every hour. Then as this simple food is tolerated additions are made to the diet, such as minced chicken, cold baked custard pudding, dry toast and weak tea. I am assuming now that there are no inflammatory complications. Afterwards minced mutton and mashed potatoes, and finally ordinary diet.

MASSAGE.

Should there be great loss of flesh, as is the case where the symptoms have existed some time and the amount of food taken has been inadequate to the demands of the body, seven or eight weeks may be usefully spent in bed after full diet

can be taken, but under these circumstances massage and faradism should be employed daily to aid the nutrition of the tissues and restore tone to the muscles.

ISOLATION.

In some patients the treatment of the case is complicated by the presence of hysteria, by which I mean a morbid mental condition the product of excessive sympathy from injudicious relatives, which substitutes for the normal desire to get well an unnatural craving to excite sympathy and receive attention. When this exists it is absolutely necessary to isolate the patient if the treatment is to succeed. Last year we had in the hospital a young woman suffering from anæmic gastralgia and vomiting who at first did very well, but after about a fortnight she relapsed, and to our dismay vomited every day for three weeks. We had not detected any sign of hysteria, but she had been the object of a good deal of interest which may have been responsible for creating the condition. At length she was isolated, and the effect was remarkable; the vomiting lasted only two days longer, and she went out cured at the end of three weeks, her stay in hospital having lasted nine weeks in all.

Isolation, to be effective, means separating the patient from all communication direct or indirect, personal or by letters, messages, flowers, or parcels, with her relations and friends, or any but those who have to do with her medical care and treatment. It is impossible to do this properly in the patient's home, so that removal to a private hospital, with which this city is now so well provided, is imperative. The remedy is not very acceptable, but the success which follows it justifies our insisting upon it; and in view of the unsatisfactory and even fatal results which may follow less efficient treatment, it is preferable to decline the case than to undertake it where failure is almost inevitable. I can recall one case from my own experience, and I know of two others, which ended fatally under treatment at home; while on the other hand, I have had a large number of cases under isolation treatment, in all of whom the effects have been good, and, in most, brilliantly successful.

In dealing with hysteria, it is necessary not only to remove the baneful sympathy, but to supply or strengthen motives which should make the patient desire to get well. The removal from her friends does this in part; but it is important to aid this, where desirable, by forbidding all amusements, such as reading or fancy work, which beguile the tedium of lying in bed, and by the use of the faradic brush or the cold douche, which stimulate a healthy longing to abridge the course of treatment, while the patient should be reminded daily that her stay depends entirely on the rate at which she improves, and her hopes encouraged by promises of speedy recovery.

CLIMATE.

When the patient is well enough to go out, it is very desirable to complete the cure by change of air and scene, by which she will avoid returning to her ordinary duties, with their often unavoidable worries, and still further strengthen her mind and body. In the winter our choice of place is limited, and circumstances may impose upon us further restrictions. But the south coast watering-places are generally suitable; if the weather is mild, those at the eastern end; if the weather is cold, the Isle of Wight or the more westerly resorts in Dorsetshire, Devonshire, or Cornwall. More wealthy patients may be sent to the Riviera, Cannes being especially suitable. I have found Weston-super-mare suit these cases exceedingly well in the spring. In the summer the seaside is generally too enervating for them, though the bracing air of Rhyl benefits many poor women in the excellent convalescent institutions which exist there for their great advantage. But higher altitudes are better adapted to restore lost vigour, and of such stations there is none better than Braemar (1200 feet), in Scotland, and none more accessible than Buxton (1100 feet). There are many stations abroad which have a reputation in the treatment of these neuroses, and at some there is the advantage of waters which correct constipation and anæmia. For a simple air station there are Wildbad (1300 feet), near Baden-Baden,

and St. Sauveur (2500 feet), in the Hautes Pyrénées. Pyrmont, St. Moritz (5859 feet) and Schwalbach (1000 feet) are useful where there is anæmia. Homburg (600 feet), Kissingen (600 feet), Marienbad (1900 feet), or Carlsbad (1120 feet), in Germany, and Châtel-Guyon (1300 feet), in France, when gastritis is more pronounced.

In the choice of a place to which to send a patient we must be guided by circumstances and the wishes of our patients. Some of the best places are a very long way off, but for bracing air no one need go further than Braemar. Unless there is marked gastritis, no other remedy need be sought from climatic change, and except in these circumstances it is much better to avoid the watering places at which organic diseases of the stomach are treated, for the *régime* followed can only be harmful to a patient suffering from a pure neurosis.

DIET.

The aphorism of Celsus—*Sanis omnia sana*—must not be accepted too literally as a sound rule in dietetics, for man's wants and caprices, the ingenuity of cooks and the poverty of nature have included among articles of human diet many which are harmful and more which are capable of doing mischief if taken in excess. It is true that there are some people who appear able to eat and drink anything in any quantity without harm, but the stomach is not a very sensitive organ, and, as Beaumont relates of St. Martin, it may be highly inflamed and ulcerated without causing any subjective sensations at all corresponding to its condition. In these circumstances St. Martin felt well, had a good appetite, and only complained of a little soreness at the pit of the stomach, so that it cannot be affirmed that our subjective sensations are a safe guide to us, or that those who appear to suffer no ill effects from excess do not do so. Neither is it safe to assume, as some do, that all which we choose to consider as food, including drink, was given us for this purpose by a Higher Power, and is good for us.

Man is an animal with digestive organs whose functional capabilities have their limits and whose structure is susceptible of damage, but no one would think so to see how some of us live. The function of digestion consists in the reduction of food to an absorbable fluid form, and this is only possible in the case of substances which are so reducible at the temperature of the body in the presence of the secretions of certain glands. The salivary glands which convert cooked starch into soluble dextrines and sugar are incapable of acting upon starch if its capsules have not been ruptured by the action of heat. The fibrous envelopes, husks, stalks, coverings and roots, and the seeds of many vegetables and fruits remain unaffected by the digestive juices, and in moderation may be beneficial by stimulating the walls of the alimentary canal, but in excess can only cause irritation, and do great harm where irritative conditions already exist.

Flesh of all kinds needs to be finely divided and freed from fat before the gastric juice can act upon it, so that meat in large lumps or with much fat in its fibre, as pork for example, is digested slowly or not at all, and acts as a foreign body, a source of irritation and discomfort.

Fat is reduced to oil at the temperature of the body, and as it frees itself floats on the surface of the stomach contents where it does no harm if digestion is accomplished and the stomach emptied in the normal time. But where retention of food occurs, as in atony of the stomach, its presence favours the growth of organisms which convert it into butyric acid, a substance which is especially irritating to the gastric mucous membrane.

Water, the natural drink of man, is now largely superseded amongst civilised peoples by alcoholised beverages or infusions containing stimulating alkaloids. Alcohol in its pure state is an irritant to the tissues, and this effect is only diminished in our drinks in proportion to its dilution either before ingestion or by the stomach contents. It is well known that alcohol is much better borne by a full stomach than an empty one. As a general stimulant to the circulation it helps an over-tired man to eat his dinner, but it hinders digestion.

This is not the place to discuss the secondary and remote effects of alcohol. Most of us take a little and like it, and believe it does us no harm ; but there can be no doubt that it is not necessary as an ordinary article of diet, that it is subject to great abuse, and that there are individuals in whom its use excites a morbid craving for alcoholic intoxication, so that it becomes a cause of personal degradation, often associated with violence and crime, which makes it a social evil of such magnitude that it is not surprising if many people clamour for the total suppression of its sale. Mahomet made abstinence from alcohol a cardinal point in the rule of life he transmitted to his followers, who founded upon his teaching a political system which, at least at one time, equalled that of Christendom, so that there is a good precedent for making it a political question ; but, unfortunately, while this rule keeps most Mahometans abstainers, those who break it generally drink to excess, and one would rather hope that, as drinking has ceased to be an important social evil among the upper and middle classes, a better state of class opinion, of which there are many signs, will have the same effect upon the great mass of our working population, than that it should be necessary to secure temperance by legislative restrictions.

Tea, coffee, and cocoa have very largely replaced the use of weak alcoholised beverages, such as beer, among women of all classes, and especially concern us. I have already alluded to the opinion widely entertained by the profession in this country that tea-drinking is a potent cause of the common dyspepsia of women. Tea is an infusion which contains a good deal of tannic acid, the alkaloid theine, a little gum, extractives, and colouring matter. The only active agents are the tannic acid and theine. Tannic acid unquestionably irritates the stomach when the organ is empty, and in that way it may set up gastritis. When gastritis is present, the use of ordinary tea should be avoided ; but if it is made with boiling milk instead of boiling water, as recommended by the late Sir Andrew Clark, these irritating effects are so much diminished that it can be

taken without harm by many people suffering from chronic gastritis.

Theine is certainly not an irritant to the stomach, and there is no satisfactory evidence that its habitual use produces nervous or physical depression; but when, as is the case with some poor women, the tea-pot is made to do duty for a meal, after over-work has destroyed appetite and the energy to seek food, then it is blamed as the cause of troubles for which it affords some temporary relief.

Coffee, which contains less tannic acid, and cocoa are much less commonly employed in this country, so that they concern us less closely. Coffee, unless taken after meals, is usually mixed with so much milk that the tannic acid is precipitated, and the resulting beverage is one of the best that man has devised.

Cocoa, in spite of its popularity, is an uninteresting harmless kind of drink, unless adulterated with starch, a fraud which is much less commonly seen than was formerly the case.

Diet in Gastralgia—Subject to these considerations and limitations of what we may fairly call ordinary healthy diet, after suitable repose has restored a healthy tone to the stomach, these cases, when uncomplicated by organic disease, may eat, and should be encouraged to eat, anything. Positive harm is done by dieting them; it tends to make them hypochondriacal and fanciful about this or that article of food not suiting them; moreover, they are often disposed to eat too little, and the necessity for at least three good meals a day should be impressed on them. If a little weak alcohol helps appetite they should take it, but on general principles spirits should not be recommended. Light wine or light beer, or even stout, may be really beneficial, the last especially, from the large amount of dextrines and sugar it contains.

In Atony and Dilatation.—When there is a distinct motor defect, fats should be taken very sparingly or not at all, and some care must be exercised to avoid the use of indigestible food, such as uncooked fruit and vegetables, pork and veal,

cheese, pickles, and pastry. The object in view is to secure a chyme which shall be formed as quickly as possible and pass the pylorus easily, and the extent to which diet must be modified to effect this must depend upon the degree of dilatation present. But marked dilatation is always associated with more or less gastritis, which leads us to those cases in which inflammatory complications have to be considered.

In inflammatory states.—In sub-acute and chronic gastritis we are guided by the same principles, with this additional rule for the more acute cases, that abstinence from food or from all but the simplest nourishment for a limited period is strongly indicated.

When the stomach is irritated or inflamed we must carefully exclude all food which comes under the following headings:—

1. Pungent and acrid substances.
2. Chemical irritants.
3. Mechanical irritants.
4. Fermentible substances.

Under the first heading are included condiments, such as pepper of all kinds, mustard, spices, and alcohol, especially ardent spirits. It is to be regretted that patients so often tell us that they have been recommended to drink spirits *because* they are suffering from dyspepsia! It should be better understood than it is that gastritis in any degree contraindicates the use of spirits.

Under the second heading are all strong acids, such as tannic acid in tea, acetic acid in beer.

Under the third heading of mechanical irritants are the insoluble, indigestible foods, fat meats, pork, veal, oily fish, salmon, mackerel, and eels, mushrooms, cheese, pastry, fried articles, uncooked fruit and vegetables, seeds, husks, and skins. This rule excludes all bread but the finest white bread, and this should be well toasted so as to insure complete rupture of its starch capsules. No brown bread or whole-meal bread should be allowed.

Lastly, we have such fermentible substances as sugar, farinaceous food and fat. We should forbid all sweets, all fats, but a very small allowance of butter, and all farinaceous food except toast and light vegetables.

This dietary is not so restricted as it may appear to be ; for example, it permits for

Breakfast.—Milk tea, *café au lait*, cocoa, toast, a little butter, white fish, fowl, game, beef and mutton boiled, roast, or broiled, hot or cold ; eggs lightly cooked, potted meats unspiced.

Luncheon.—White fish, fowl, game, beef and mutton, boiled, roast or broiled ; mashed potato, cauliflower, brocoli, vegetable marrow, early peas ; custard pudding, jelly, isinglass blancmange unsweetened or with little sugar ; claret or hock with aërated mineral water.

Tea.—Milk tea, toast, German rusks.

Dinner.—No soup ; any fish but salmon, mackerel, and eels ; beef or mutton ; sweetbreads, calves' head or feet, cowheel, tripe ; all light vegetables ; fowl or game ; well stewed fruit free from stones, skins, or fibres ; custard, jelly ; toast or rusk ; cream cheese ; claret or hock with aërated mineral water.

All uncooked food and all that is acrid, pungent, sour, sweet and greasy, should be carefully avoided.

In the treatment of a case of sub-acute gastritis which will only require care for two or three days it is better to tell your patient exactly what to eat, but where the disease is more chronic it is better to tell her what things to avoid.

EXERCISE.

The muscular system depends for its health on regular exercise, and this process not only keeps the muscles in tone, but promotes the circulation and respiration and the glandular functions of the body. It is probable that large muscles demand more active exertion than small ones, and that spare bodies are benefited as much by rest as fat ones are by exercise. The importance of rest in these cases has already been explained, and where exercise is productive of fatigue it must be discouraged, or at least restricted to limits within which the patient will not feel tired. Exercise should be taken early in the day, and may with advantage be avoided later. Patients are not all alike ; some require urging to take the necessary

exercise, others—and those not a few—are seriously disposed to overdo it.

The advice put into the mouth of a doctor in a popular modern novel is worth quoting. "One or two hours' walk regularly every day is what you should take," I told her. "The virtue of it is in the regularity. If you make a habit of taking a short walk daily, you will have got more sunshine and fresh air—which is what you specially require—in one year than you will in two if you continue to go out in a jerky irregular way. And you must give up covering impossible distances in feverish haste, as you do now. Walk gently, and make yourself feel that you have full leisure to walk as long as you like. You will find the effect tranquillising. It is a common mistake to make a business of taking exercise. I am constantly lecturing my patients about it. If you want exercise to raise your spirits, brace your nerves, and do you good generally, it must be all pure pleasure without conscious exertion. Pleasurable moments prolong life."

The answer is very characteristic of the neurotic woman: "Thank you," Evadne answered gently, "I know of course that you are right, and I will do my best to profit by your advice, if it be only to shew how much I appreciate your kindness; but I must have a scamper occasionally—a regular burst, you know."

ELECTRICITY.

It would be strange if, in an age in which electricity has become the substitute for more simple means of stimulating the popular imagination, there should be nothing to say as to its virtues, real or alleged, in the treatment of these neuroses. Apart from its influence upon the imagination, with which I do not concern myself, electricity plays a useful part, as has been already stated, in preserving and improving the nutrition of the muscles, and as a stimulant to the circulation in the skin. But in atony and dilatation of the stomach we may apply either current to stimulate the action of the muscular wall and to

restore its tone. This may be done through the abdominal wall by applying large well-wetted flat electrodes over the region of the stomach, but much more certainly by means of Max Einhorn's stomach electrode, which I now show you. The stomach is filled moderately with water, and the electrode introduced in the same fashion as a stomach tube, while a large flat electrode is applied to the epigastrium. We can then connect them with either current; but our plan has been to use four or five cells of a constant current, which is interrupted every five or ten seconds. In the early stages this treatment obviously has a much better chance of success than in the more advanced cases in which we have generally used it. It is not difficult of application, but its value is still in doubt.

STOMACH TUBE.

The modern soft stomach-tube is an instrument which serves the double purpose of filling and emptying the stomach. In some cases of anorexia, complicated by hysteria, it is often necessary to threaten to feed by the tube, but very rarely have we had to carry out the threat. It may be used to wash out the stomach when there is reason to believe that there is retention of stomach contents, and its use becomes imperative when there is decided dilatation. To a considerable extent we may get the same results from emetics as from the tube, and with less alarm to the patient, for although they soon get used to the instrument and pass it readily for themselves, it is always distressing at first. Therefore in cases of recent trouble, where the stomach would probably need to be washed out once only, I prefer to the tube an emetic of zinc sulphate, given together with plenty of warm water. There is a reason to believe that this instrument is used too little in this country and too much in Germany. The best antiseptic for washing out the stomach is a one per cent. solution of salicylate of soda.

DRUGS.

Iron.—On account of the prevalence of anæmia in these cases, iron takes a very prominent place in their treatment.

Where this symptom is marked, we may give pil. ferri (Blaud's pill), sulphate of iron in mixture, so often usefully combined with sulphate of magnesium, or the tincture of the perchloride of iron.

Strychnine.—This drug is extremely useful in combating the motor weakness of the stomach and intestine, and may be suitably combined with iron, or in those cases where iron is not indicated, with a mineral acid, of which hydrochloric acid seems the most appropriate. A mixture in which these two drugs formed the essential elements is very beneficial to the ordinary type of atonic gastralgia, and is thus formulated in the General Hospital pharmacopœia :—

R	Ac. hydrochlorici dil.	.	.	℥ x.
	Ac. hydrocyanici dil.	.	.	℥ v.
	Liq. strychninæ	.	.	℥ iiss.
	Sodii chloridi	.	.	gr. xx.
	Glycerini	.	.	℥ xxx.
	Aquam ad	.	.	℥ j.

Ft. Ht.

Sigr. To be taken thrice daily an hour after meals.

Magnesium and Sodium Sulphates.—These admirable aperients deserve early mention among the drugs which stand first in usefulness and in the frequency with which they are required. Constipation is the absolute rule in these cases, and of all aperients the salines are the best. When the patient is in bed the dose may be divided and given three times a day, but when she can get about it is better to give it the first thing in the morning on rising from bed. I think there is little to choose between the magnesium and sodium salt, except in their taste, of which probably to most people the former is more disagreeable. Either may be given in the shape of mineral water, of which Franz-Josef, Æsculap, Friedrichshall, and Hunyadi are among the best known magnesium waters, and Carlsbad, Kissingen, and Rubinat, the sodium waters. The last is in my experience one of the least disagreeable and most efficient ; I recommend it constantly with excellent results, but among so many in the market I have no doubt there are others equally satisfactory. Aperient waters

may be taken hot or cold, and probably act better as a rule when hot. I say "as a rule" because I have known exceptions. If really hot, they are less disagreeable, but if only warm, their nauseous taste is increased and may cause vomiting. Where there is gastritis these salts or waters should always be taken in half a pint of water as hot as it can be sipped.

Mercury.—Abernethy said he would define biliousness as a condition curable by blue pill, and there should be no doubt of the value of this remedy in all cases of subacute gastritis. The drug may be given in the form of calomel or blue pill. I prefer the latter, and I generally give two five-grain pills, one to be taken at bed-time on successive or alternate nights according to the extent of its action. It unquestionably has the power of allaying gastritis, and in small continued doses is useful in the chronic form as well. How it acts—whether as an antiseptic, or by unloading the vessels, or by both means combined—we cannot be sure, but its power in both these directions is indisputable, and no one will question the good results which follow its administration. That mercury was abused in the treatment of the early part of this century there can be no doubt. Sir Robert Christison used to illustrate this abuse by relating that when he was a young man attending St. Bartholomew's Hospital, a discussion upon this subject arose among a company, of which the House Surgeon formed one. In order to maintain his opinion, Christison offered to bet him that there were not ten patients in the hospital who were not at the time under mercurial treatment in some shape or form, but the House Surgeon would not accept the challenge, so little certain did he feel of winning it. Nevertheless, the reaction that set in led to the undeserved disrepute and consequent neglect of one of the most generally useful drugs in the pharmacopœia.

Bismuth.—In the treatment of gastritis, whenever there is evidence of much irritation by pain, furred tongue, icterus, or mucous vomiting, etc., bismuth is indicated. It may be given in various combinations and forms; for example, in subacute

gastritis I give with blue pill and a saline aperient the following powder, to be taken thrice daily before food.

R	Bismuthi salicyl.	.	gr. x.
	Sodii bicarb.	.	gr. x.
	Pulv. rhei	.	gr. iij.
	Pulv. cinnamomi co.	gr. v.	
Ft. Pulv.	Mitte	xij.	

It should be taken in milk, and is an excellent remedy for ordinary use. Where the bowels are irritable, I omit the rhubarb.

In chronic gastritis, with mucous vomiting, I give the following.

R	Bismuthi carb.	.	gr. xv.
	Sodii bicarb.	.	gr. x.
	Muc. tragacanthi	.	5 ss.
	Aq. ad	.	5 j.

M. ft. Ht.

Sigr. To be taken thrice daily before meals.

In cases of atony, with slight gastritis, I order—

R	Liq. bismuthi et ammon. cit.	.	5 j.
	Sodii bicarb.	.	gr. x.
	Tr. nucis vom.	.	℥ x.
	Inf. gentianæ ad	.	5 j.

M. ft. Ht.

Sigr. To be taken thrice daily before meals.

Hydrochloric Acid and Pepsin.—We have seen that not very uncommonly there is distinct deficiency in the hydrochloric acid of the gastric juice; it is difficult to give as much as is needed to compensate for defective secretion, but fifteen drops in a wineglassful of water may be taken through a tube every hour for four hours after each meal. Pepsin is much more rarely absent, as so little of the ferment is actually necessary, but when artificial digestion has determined the want of it, it may be very easily supplied by any of the good preparations now in the market. In connection with the use of these remedies it may be said that they do not do so much good as might be expected, nor does their absence produce the ill-effects we should anticipate. In fact so long as the food is not retained too long in the stomach its chemical condition is of comparatively little

importance, the deficient digestion in the stomach being made up by the activity of the pancreatic and intestinal juices. It is therefore to the various means for promoting motor activity that we should chiefly look in the treatment of these cases.

I hope that some of my hearers have been able to accept my conclusions, and will try to recognise the various types described, and treat them on the simple principles which I have recommended. I cannot doubt that, rightly applied, they must prove as successful in the hands of others as in my own.

In conclusion, gentlemen, let me thank you for your kindness in attending and your patience in listening to this course of lectures. It is a great honour and privilege to have had this opportunity of addressing you. My discourse has fallen very far short of my own estimate of what the occasion demanded, but in simple form and brief compass I have given you the results of a clinical study which has extended over many years, and, from the time and care expended upon it, may claim to be not altogether unworthy of your attention.

THE ANTISEPTIC TREATMENT OF TUBERCULAR PHTHISIS.*

BY ARTHUR FOXWELL, M.A., M.D. CANTAB, F.R.C.P.,
PHYSICIAN TO THE QUEEN'S HOSPITAL, BIRMINGHAM.

Mr. President and Gentlemen,

The complete antiseptic treatment of phthisis has four main ends to accomplish, viz. :—

1. The prevention of the entrance of the Bacilli of tubercle into our bodies or into the bodies of domestic animals.
2. The destruction of the Bacilli which exist in the waste products of the disintegration of tissue induced by their action.
3. The destruction of the Bacilli which exist in the still living tissues.

* A paper read before the Birmingham and Midland Counties Branch of the British Medical Association, March 8th, 1894.

4. Nullifying the septicæmia which results from the ptomaines and various pyogenic cocci, which arise as secondary products of bacillary life.

The first of these belongs to the domain of Prophylaxis and lies chiefly in the province of the Medical Officer of Health. To achieve it we must scrupulously disinfect the dwellings previously inhabited by sufferers from tubercle, and especially all articles of personal use. Close physical intimacy of life between phthisics and non-phthisics must be strenuously striven against, and most of all must we, as physicians, with persistent pertinacity, conduct a crusade against the marriage of bacilli-laden organisms, never tiring in our efforts till women have included such marriages in the code of their immoralities. The hidden evils of sputum must be no longer kept shrouded, but fully exposed to the view of the laic mind till all men and women are aware of the wickedness of ubiquitous spitting. It is by thus awakening the moral sense of the laity that, in my opinion, lies the great hope of tubercular prophylaxis: the disease is much too insidious to be dealt with successfully by legal restrictions alone; and we must never forget that the duty of pioneering in this awakening is ours, as disciples of medicine.

To attain the second end, complete sterilisation of the sputum is necessary, and also the disintegrated tissues must be made innocuous before they become sputum, whilst they lie in the cavities of the lung caused by their disintegration, or in the lumina of the bronchi. We thus not only destroy the evil power of the sputum, but also render harmless the air expired, and prevent the auto-infection of other regions of the body, *e.g.* the larynx, by means of the air passages. The sterilisation of the sputum can be easily and completely accomplished, and there is therefore no excuse for its omission, nor do I believe that if the laity were only fully aware of the immense importance of its performance, there would be any difficulty in getting them to thoroughly carry it out, for they shew us an excellent example in the willing energy they display in obeying the regulations concerning isolation and disinfection in specific fevers. But as yet

the medical profession itself is a very poor leader, as the unhygienic state of the spittoons in many of our general hospitals abundantly testifies. There seems great hope that the sterilisation of the excretion before it leaves the body is by no means impossible, either through inhalation of suitable remedies, or by injections into the cavities of disease, or, at least, the upper air passages may be kept in a state refractory to the bacillus by similar topical methods, and so auto-infection of these be prevented. This last, considering the rarity of primary laryngeal tuberculosis and its rebelliousness when once started, is a precaution too little considered by us.

The third end, that of destroying the bacilli in the still living tissues, is the real aim we have to strive for in the antiseptic treatment of patients suffering from tubercular phthisis. There are several ways of attaining this: we may (*a*) endeavour to make an antiseptic solution of the blood and lymph; (*b*) increase the cardiac strength so that there may be a more vigorous circulation through the bacillary districts; (*c*) enhance the respiratory interchange of gases, thus keeping the body as thoroughly oxygenated as possible; (*d*) increase the nutrition of the cells of the lung parenchyma; (*e*) increase the positive chemiotactic* power of the bacilli and also the capacity of the phagocytes for devouring bacilli, since Hankin has shewn that it is one thing to bring the phagocyte and bacillus together, and quite another to excite the phagocyte's voracity.

To nullify the septicæmia of phthisis (our fourth end) we must destroy the pyogenic cocci which cause it. Jakowski (*Centralbl. für Bakt.*: 9. xii. 93.) has examined the blood of 9 patients suffering from phthisical hectic: in 5 he found staph. pyogenes aureus; in 2, staph. pyogenes albus; in 3, streptococcus pyogenes. These were sometimes alone and sometimes in combination; in 2 patients no cocci were found. In one case, where no cocci were found at first, when there was no hectic and the disease

* Chemiotaxis is the term given to the property micro-organisms (or rather the soluble products of these) possess of attracting (positive chemiotaxis) or repelling (negative chemiotaxis) the wandering cells (phagocytes).

was limited to one apex, at a later examination, contemporaneous with a further destruction of lung tissue, they were readily obtained. Phthisical hectic, it is evident, must therefore be treated on the same principles as we treat pyæmia arising from other causes.

In this paper I shall only attempt to discuss the capacity of some drugs to make the body fluids antiseptic as regards the bacillus of tubercle. This is an action altogether apart from phagocytosis. Phagocytosis is the destruction of a germ by a living cell and is a variety of protective inflammation; whereas the action of antiseptic drugs is a purely chemical one and consists in poisoning the bacillus, but not necessarily dealing in any way with its dead body. So far as I can learn, no drug has yet been shewn to possess the power of destroying the vitality of all the bacilli existing in the lungs of a human being the subject of tubercular phthisis, though there is good evidence that during the exhibition of some, the bacilli are placed temporarily *hors de combat*. If this is so, it is evident the disease will be arrested so long as the drug is administered, and there seems ground for hope that after a prolonged administration all these paralysed bacilli will have been eliminated from the body.

There are many drugs—e.g., creasote and eucalyptol—which will purify foul expectoration, will prevent the occurrence of decomposition within it, in other words, will kill the bacilli of various kinds—including the *B. Tuberculosis*—which may be contained in it. But this is a very much easier thing than destroying the germs in the lung parenchyma itself; just as it is far easier to render sterile a typhoid stool than to cut short the multiplication of the germs in the walls of the ileum. Expectoration, whether it be in a lung cavity, in the bronchi, or in the spittoon, is merely the excrement of diseased lung, an excrement which has become so greatly in excess of the normal that it can no longer be got rid of by normal means, viz., by exhalation and re-absorption,

It is then by its power of destroying the bacilli in the still living and still vascular tissues that the value of antiseptics has

to be judged. I am one of those who believe it has great capacities in this direction, though at the same time admitting that no drug can compare with the antibacillary force of the phagocytic action of the organism itself.

For the purpose we have in view drugs can be administered by inhalation, intra-pulmonary injection, intra-muscular injection or *per os vel rectum*.

Inhalation is the feeblest of all methods for administering antiseptic remedies to the lung parenchyma. If these be inhaled in the form of pulverised liquids it is doubtful if they ever reach beyond the medium-sized bronchi. In the gaseous form, it is true, they may be taken up by the blood, as is oxygen, and by means of the lymphatics may attack the bacilli in the parenchyma. Fraentzel, in 1883, and Hiller, in 1885, tried inhalations of carbolic acid, creasote, bromine, sulphuretted hydrogen, iodoform and others, but in no instance found any diminution in the number of bacilli, nor any change in the morbid condition of the lungs. As we shall see, later on, other investigators have been apparently more successful though probably most of the benefit derived from inhalations is due to their action upon the products of tubercular disintegration rather than upon the *cause* of this morbid process.

The *locus standi* of intra-pulmonary injection I fail to discover, nor can I admit the reasonableness of its employment unless we believe that a much stronger solution of a drug can be injected into a focus of diseased lung tissue than can with safety be passed into the general circulation by means of the muscular lymphatics. But clinical experience refutes this belief: indeed the same solution often produces more untoward symptoms when injected into the tissue of the diseased lung than when injected into muscles. And this is indeed what would be expected, for the circulation in the diseased focus is enfeebled and to a great extent cut off, whereas the drug injected into healthy muscle is speedily and greatly diluted by the rapidity of the fluid currents which it enters: moreover, muscle is notably less vulnerable than lung parenchyma. Intra-

pulmonary injection seems to me to stand on the same footing as Excision : the scope of both must ever be extremely limited : limited to those patients where we have very greatly preponderating evidence that the tuberculisation is absolutely confined to one well-defined focus, and the physician who has ever felt confident that he has, in any case, elucidated such evidence has attained a more fortunate experience in pulmonary tuberculosis than has, as yet, fallen to my lot. To inject an antiseptic into a tubercular *cavity*, no matter how circumscribed it be nor how sure we feel of its singleness is, to my mind, but playing with a great therapeutic measure and falsifying its results ; for *post mortem* examinations indubitably show that wherever a cavity exhibiting signs of activity has existed there also have been found, in the tissue around it, many or few, grey and yellow tubercles, to most of which the solution would not penetrate as Dr. C. T. Williams' experiments on dead subjects tend to show. If, on the other hand, the cavity be stationary and quiescent or contracting we should surely do best by acting on the old adage "let sleeping dogs lie." Results confirm these conclusions, for though *post mortems* have shewn that in some cases the cavities have been benefited, yet the very fact of these *post mortems* negatives the value of the treatment.

Intra-muscular injection is no doubt the best way to reach the blood and lymph, and there is no lack of suitable solutions to administer in this way, but it is not a pleasant mode of administration, and we English have not as yet taken kindly to it for chronic disease. Moreover the strong association of the hypodermic syringe with morphia makes us hesitate before we place such an instrument in a patient's hands, and, unless we do so, the method is beyond the reach of the majority of phthisical patients.

There is left to us the alimentary tract. The mouth being the natural entrance for food is evidently the most congenial gate through which to take any solid or liquid into our bodies, but its use has the serious objection of sometimes causing gastric upset. The rectum has not this drawback, and most drugs can be well

absorbed by it, and if given in suppositories not much objection is made by the patient, hence it is a valuable alternative to the mouth in those cases where gastric disturbance arises.

The group of phenols have perhaps been used in the treatment of phthisis more than any other antiseptic, and I will proceed to discuss these first. Pharmacy has now reached a step beyond the crude drugs, carbolic acid, creasote, and guaiacol, which from their caustic poisonous nature and unpleasant taste were very difficult of administration, and has passed to compounds of these which, whilst harmless and tasteless, are almost equally powerful as antiseptics; such are salol, betol, benzosol, paracresalol, guaiacol carbonate, creasote carbonate, and the group of bismuth phenols of which naphthol-, cresol-, and tribromo-phenol-bismuth are the most important.

The members of the phenol group destroy all germs in solutions outside the body, as well as those existing in the alimentary tract; but, during absorption, they change into unknown non-antiseptic compounds, for Hølscher (*Berl. Klin. Wochens.* No. 3, 1892) has shewn that the blood cannot be sterilised however large the dose exhibited. These phenols then cannot be strictly termed antiseptics as regards living germs in the tissues, but there seems good reason to believe that after absorption they combine with the albuminous toxines which result from germ life, forming non-toxic compounds which are eliminated by the urine as ethereal sulphates. They do not kill the bacilli, but they obviate the evils resulting from the existence of these,* and thus prevent injury to the tissues, the bacilli remaining harmlessly in the body, and in due course becoming excreted, we would hope, as effete material; but no clinical proof of the extermination of the bacilli by the use of phenols has been produced, though there is ample evidence of the power they possess in keeping in check the evil symptoms of tubercular septicæmia.

* For as I have before stated it is the toxic albumins which result from bacillary life which attract the phagocytes, that is, produce *pneumonic* phthisis.

Creasote itself is an old remedy for tuberculosis. It was thus used by Reichenbach so long ago as 1830. Bouchard and Gimbert revived its use in 1877, publishing an exhaustive analysis of 93 cases so treated. They found:—(1) a lessening of cough and expectoration in one to two weeks; (2) in three weeks a diminution of the fever with an increase in the appetite and strength; (3) at the same time, frequently, the night sweats vanished, and the disease appeared arrested; (4) a few weeks later, improvement in the physical signs indicative of fibrosis appeared, this sometimes occurring with almost incredible rapidity.

Sommerbrodt aroused a fresh German interest in the matter in 1887 by claiming it as a specific, basing his statement on an experience of nine years and 5,000 patients. He usually exhibited it in a capsule containing $\frac{3}{4}$ of a minim with 3 m of tolu balsam four to six times a day.

Bouchard and Gimbert gave as much as 11 minims in a single dose. But Warner (*New York Med. Journ.*, 11, xi, 93), has gone far beyond this amount; in one case, the patient, a lady, taking for a long period a daily dose of 78 minims. Warner gave it after food in milk, sweetened water or wine, or with gentian or cinchona. He found that the general condition greatly and rapidly improved, the cough lessened, the sputum became more watery, and the fever and sweating often vanished. Sickness and diarrhoea were the chief symptoms of an overdose with premonitions of headache, vertigo, and dimness of sight.

In my own experience, creasote acts as a gastric irritant in any quantity beyond a daily dose of m 6, and I have never traced any change in the pulmonary and constitutional condition of my patients to its use in such amount. But I have never thoroughly tried the drug as, when pushed, it proved so disagreeable.

Guaiacol forms 60 to 90 per cent. of beech creasote (Martindale) and possesses the latter's antiseptic qualities. It is far less unpleasant to taste and smell than creasote, and I have found patients take it with comparative ease dissolved in

cod liver oil in doses of 2, 3, and 5 minims three times daily. Only occasionally have such doses disagreed, and I have noted distinct improvement in cough and expectoration as an almost uniform result, yet other changes have not been sufficiently constant to enable me to ascribe them with any certainty to the action of this drug.

But guaiacol is already out of fashion, and I do not suppose it will ever again have a vogue for phthisis. So butterfly-like is the life of a drug! A descendant, guaiacol carbonate, has usurped its position. No doubt its usurpation is permanent, for it has none of the evil qualities of its ancestor, whilst possessing, apparently, all its power for good.

It passes through the stomach unchanged, but in the intestine it slowly resolves into guaiacol and carbonic acid, the guaiacol in its nascent state being absorbed as quickly as it is set free. The small amount of carbonic acid set free acts merely as an intestinal sedative just as it does when given with hydrogen sulphide enemata. Guaiacol is excreted in the urine, though not as guaiacol, but as a body which reacts like phenol with bromide water (Poggi, B.M.J.Supp.). This body is found in the urine half an hour after the ingestion of the carbonate. Guaiacol carbonate is an odourless, tasteless powder containing 91 p.c. of pure guaiacol. As much as $2\frac{1}{2}$ drachms have been given daily with no untoward result. I have usually begun with 5 grains thrice daily and have not gone beyond a dose of 10 grains. There is no doubt of its good action on the catarrhal element in phthisis, but I have not yet observed any removal of deposit, it has merely *dried* the lungs. However, my experience has been both scanty and brief, only extending over 12 months. Its expense almost debars it from use in the out-patient department, as *a priori* it would take large doses to fully try it by making the body-fluids thoroughly antiseptic.

Reckoning the bacillicide action of guaiacol as equal to that of carbolic acid, and 5 per cent. to be a sufficiently powerful solution of this latter: further, estimating the body fluids of an ordinary patient to weigh 20 pounds, then we should require to maintain constantly in the body one pound of guaiacol, and as

it is so rapidly excreted* after ingestion, the maintenance of this amount would probably require 4 ozs. daily to be administered; though that in the lymph would be much less quickly eliminated than that existing in the actual blood stream itself.

Can such an amount be taken? A ten weeks old puppy is said to have taken 5 drachms daily and Høelscher gave as much as 100 grains daily to patients with no obvious ill-effects. Indeed a daily dose of $2\frac{1}{2}$ drachms can apparently be daily ingested with impunity. Guaiacol carbonate has evidently not yet been pushed to its limit, but whether that limit will be so far beyond the doses at present administered as 4 ounces it is impossible to say.

Could such a dose be given, how long would the treatment have to continue? The spores of bacillus anthracis are destroyed by a 24 hours' exposure to a 5 per cent. solution of carbolic acid, according to experiments made by Koch.† In early tuberculosis, where the tubercles are small and therefore no bacilli or spores far removed from the active circulation of blood and lymph, 2 or 3 days of such "disinfection" should prove sufficient. After making full allowance, especially in later cases where the caseous masses are large, for defective circulation, still a week of such thorough treatment should suffice to destroy any germs existing in the body.

The eradication of tubercular phthisis by a single week's treatment makes one think of Utopia rather than of this work-a-day world, yet, in medicine, truth has ever proved stranger than fiction, and *a priori* there is no inherent impossibility in the matter whatever. I have never been able to fall in line with those thinkers who maintain that any antiseptic strong enough to destroy germs within the body will also destroy the body cells.

* Linossier and Lannois found it in the urine 15 minutes after its application to the skin: the maximum excretion occurred from $1\frac{1}{2}$ to 4 hours after the application, and only traces could be detected in the urine 24 hours after. 55.5 per cent. of the amount applied was recovered from the urine (*Sem. Méd.* 7. ij. 1894. quoted by B. M. J. Supp.).

† Brunton: *Pharmacology and Therapeutics*, p. 74. Brunton also states that "the action of carbolic acid on other fully developed microzymes, or on the spores, is almost the same as on the anthrax bacilli" (p. 75).

If the body cells can resist the injurious influence of an antiseptic no more than germs, then surely the whole fabric of antiseptic surgery as well as of antiseptic medicine falls to the ground, for on this reasoning, if the antiseptic do not destroy the cells, it will not destroy the germs; and no one carries antiseptics in surgery to the point of cellular necrosis. But yet who can deny the specific action of iodoform in the local treatment of tubercular abscess?

Moreover, if this theory hold good, then any smaller dose of an antiseptic must be futile, for whatever damage it may inflict upon the germ, it will inflict equally upon the phagocyte; *both* combatants will equally suffer, and hence no good accrue to either; I can perceive no logical *via media*. It cannot be argued that any hindrance to the inroad or multiplication of the germ must correspondingly strengthen his opponent, the phagocyte. This is not so, for the very cause of the mobilisation of the phagocytic army is the invasion of the germ, and the greater the host of germs the greater also the army of mobilised phagocytes. The result of the warfare is a sad desolation of the lung parenchyma—the battlefield of the contending forces; but whether this desolation be chiefly due to the ravages of the germinic, or to those of the phagocytic army, it is impossible to say.

Another, perhaps more practical, question is the advisability of slowly or rapidly increasing the dosage: by slow increments more can in the end be usually tolerated, the system becomes habituated and more refractory to the action of the drug. But do not the germs get similarly refractory? And we must remember that the generations of germs in any given time will be more numerous than the generations of cells. Natural selection would thus tell in favour of the germs, they would become immune to the drug sooner than would the cells. If there be any cogency in this argument, it will be wise to rise to the maximum dose as speedily as possible.

(*To be continued.*)

NOTE ON ANÆSTHETICS.

BY LAWSON TAIT.

[THE following pages contain the chief points of a letter from me which appeared in the *Buffalo Medical Journal* in reply to a passage in an article by a distinguished pupil of my own, Dr. Byron Robinson, of Chicago. I feel strongly that many of the facts and views contained in this letter are not regarded as of sufficient importance on this side of the Atlantic, and therefore I have asked the Editor of this *Review* to reproduce them.]

It is now about twelve years since I made the discovery that the anæsthetic administration of ether in the human subject may—certainly does, in some instances—completely arrest the flow of urine during its administration. The discovery was made by accident in a case of great rarity, a uretero-uterine urinary fistula, where I failed time after time because I missed the fistula. This was due to the fact that I used ether and therefore thought I had closed the aperture, when I had only temporarily arrested the flow of urine at the very time when I most needed the guidance of its misdirected current. I then used chloroform, closed the fistula properly, and cured the patient.

In operating on several bladder cases immediately after this incident, I had opportunities of confirming the experience, and these facts set me thinking. At that time a great enthusiasm had set in for the use of ether, a prejudice had steadily grown against chloroform, and I had, unfortunately, been carried away with the stream. But my new fact set me thinking, and my thoughts drove me into a careful research of a number of fatal cases of operation where no complications of the operation could account for the deaths, but where the fatal results were found to be due to pulmonary and renal lesions, some known to have been in existence before the operation, others not suspected or not possible as antecedents.

I appealed to my friend and colleague, Dr. Robert Saundby, now known as one of our greatest authorities on renal pathology and then our acting pathologist, for assistance, and that was promptly and abundantly given. He had known for years that degenerative changes in the kidney were very commonly associated with all abdominal tumours. Dr. Saundby and I had discussed the fact often before 1878. I knew perfectly well that many operators refused to undertake cases where the coarse test of the presence of albumen in the urine seemed to indicate serious kidney disease. But I had steadily set my face against ever refusing to operate on any case whatever, and, therefore, disregarded this apparently ominous sign. The result was that I scored a great number of brilliant successes in cases refused by men then at the head of my department. But I met with equally disastrous failures in cases where I could not see that anything was wrong with the operation and where Dr. Saundby and, subsequently, Dr. Foxwell steadily reported "kidney degeneration and pulmonary œdema."

Then two cases occurred which put a great light on the whole thing, a light which ought to have been admitted before, and would have been recognised long before, but for that most unfortunate habit we adopt of moving restlessly about in streams of fashion, giving to no proceeding and to no plan a systematic and logical investigation. The cases were, briefly, these:—A young Irish girl came to me with an enormous ovarian tumour, which had been tapped over and over again, the radical cure having been refused to her by no less than five leading surgeons in Great Britain alone. Her legs were so enormously swollen that no kind of joint flexion was possible, and no vaginal examination could be made, on account of vulvar œdema. She passed only about twenty ounces of urine in each twenty-four hours, and quite half of that was albumen. According to our notions at that time, nothing could be more unpromising, but I undertook the operation. On thinking over the special conditions of the case, I remembered Simpson's great belief in chloroform as a remedy for the extreme conditions associated with albuminuria,

especially the eclampsia of the puerperal woman and the convulsions of post scarlatinal nephritis. I determined to give this case chloroform, and she got well without an interruption, the albuminuria disappearing as rapidly as her convalescence. In three months she was a strong and perfectly healthy woman.

The other case was that of a strong young woman of thirty, with a rapidly growing soft oedematous myoma. All her visceral functions were healthy, so far as could be determined, before the operation. I did hysterectomy, the patient being under the influence of ether. She passed very little and highly albuminous urine after the operation, and she never drew an easy breath after she came out of the anæsthetic. Death occurred on the fourth day, and *post mortem* examination shewed that she died of acute pulmonary oedema, that the kidneys were quite healthy, and that the ureters were quite uninjured and far away as usual from the clamp wire. (I had feared they would not be found to be so.)

This was a lesson which could not be misunderstood, and I immediately published my experience, which received many important confirmations, to the effect that ether had secondary results of an extremely risky kind on the kidneys and on the lungs, but the utterance made but very little impression. My experiences were summarised and published, in 1884, in a paper entitled "A Series of One Thousand Cases of Abdominal Section," as follows, and I thought then, as I think now, that they were the most important sentences I have ever published in my life:

"The question of the best anæsthetic for use in abdominal surgery is one to which, of course, I have given a very large amount of attention, and it is very singular that in the class of drugs, the action of which there can be the least doubt about, we are, as yet, certainly very unsettled in our views. Like all pupils of Simpson, I began my professional life with a most profound belief in the advantages of chloroform over all other anæsthetics. I have never seen an accident from chloroform, but, partly by reason of the fear of inquests and partly by the

example and teaching of Dr. Keith, a belief grew in my mind that ether was preferable to chloroform, and at first I had the impression that the sickness after ether was less marked than after the use of its rivals. I was not, however, very long in discovering that ether has special risks for people with a tendency to bronchitis; and later on I discovered, and have already published the fact, that during the administration of ether the secretion of urine is completely arrested. It was subsequently very forcibly impressed on me that, for patients with damaged kidneys, ether is a dangerous anæsthetic, and although I cannot say that I have seen any fatal results arising from this peculiarity of its action, I certainly have had abundant cause to fear it. My first alteration, therefore, in my views concerning ether, was to limit its application to patients under forty, but even after this I found my confidence in its safety greatly diminished by the fatal occurrence of bronchitis in a case of hysterectomy in a woman aged thirty. In this case the patient's breathing was embarrassed from the moment she recovered from the anæsthetic, her urine was scanty and became ultimately albuminous, and she died on the fourth day from suffocative catarrh, the *post mortem* showing that, so far as the operation was concerned, everything was perfectly satisfactory."

These utterances attracted very little attention, and my example was very little followed, if at all. The reasons were two: first, that crowds of experiments on animals had just been published, in which it was proved that, so far as animals were concerned, ether was a safe anæsthetic and chloroform was not. Even if this conclusion were correct, and for many reasons I doubted, and still doubt it, I urged the plea that what was true about animals need not be, and was not, true about human beings, and that no animal was known which suffered from chronic renal degeneration or which died from acute pulmonary catarrh. Nobody would listen to me, and my arguments were put down as those of a crank who had strong views about experimenting on animals. My views on this subject were entirely misrepresented, as they have been again, and quite

CHICAGO,
1893.

Highest Award.

MEDAL
AND
DIPLOMA.

‘Viro.’
POSITIVE
SUBSTITUTE
for
COD LIVER OIL.

FORMULA.

“Viro.” simply consists of beef marrow fat from marrow bones which are sawn in sections and the marrow scooped out. The marrow, when separated, is dissolved at a very low temperature, and afterwards combined with raw eggs, the shells of which are also brought into the preparation by the aid of lemon juice. To this is added the carbohydrate in the form of malt extract. So that the fats (marrow and eggs), the proteins (egg albumin), and carbohydrate (extract of malt) are arranged in proportions carefully calculated on modern physiological and dietetic data. That the emulsion is a very perfect one is shown by the appended microphotographs, all under power 250.

British Medical Journal, Jan. 13th, 1894.

ANALYSIS.

(CAFFYN’S MALTO-CARNIS.)

“The title succinctly describes this preparation, and our examination confirms the description.

FORMULA.

R	Liquor Carnis (Caffyn)	... 66 parts
	Cocoa Essence (Cadbury)	... 10 ”
	Ext. Malt	... 24 ”
	Misce sec. art.	

ANALYSIS by “The Lancet” Chemists:

“Analysis showed—mineral matter, 3.50 per cent. (rich in soluble phosphates); total solid matter, dried at 100° C., 60.28 per cent. Nutritious and stimulating elements like these are rarely found combined in so satisfactory a manner.” *The Lancet*,

Samples supplied by the

LIQUOR CARNIS CO., LTD., ASTON CLINTON, BUCKS.

NESTLÉ'S FOOD

FOR

INFANTS & INVALIDS.

"Invaluable in Cholera Infantum."

"Beneficial as a Diet in severe cases of Typhoid."

"Renders valuable assistance in Wasting Fever."

PAMPHLET containing Extracts from Standard

Medical Works in which the above

Testimony is given, sent free with

Sample Tin on application to

H. NESTLÉ,

9, Snow Hill,

LONDON,

E.C.

HIGHEST HONOURS at the CHICAGO EXHIBITION,
THE MEDAL and DIPLOMA have been
awarded both to NESTLÉ'S FOOD and NESTLÉ'S MILK.



ATTENTION

is also drawn to

NESTLÉ'S

SWISS

(CONDENSED)

MILK.

Which through its RICHNESS in CREAM and UNIFORMITY of QUALITY has obtained the LARGEST SALE IN GREAT BRITAIN.

It can be used for all purposes of FRESH MILK.

Samples to members of the Medical Profession sent free on application to

H. NESTLÉ, 9, SNOW HILL, LONDON, E.C.

recently, by the editor of the *British Medical Journal*. I am content to leave the quasi-moral arguments alone, and I confine myself to my own department, that of surgery, and I said fourteen years ago what I say now, that, for surgical purposes, experiments on animals are wholly untrustworthy and have been, in very many instances, grossly misleading. I have never said anything more, and no amount of bullying or ridicule will make me say anything less. So much for the first reason of the neglect with which my utterances on anæsthetics were received. My only comfort is that, last year, I induced the Council of the British Medical Association to exclude from their officially conducted research on anæsthetics all experiments on animals.

The second reason was a stronger one. England is emphatically the land of coronor's inquests; and, considering also it is the land which has established the freest and yet most responsible system of jurisprudence the world has yet seen, its people stand an amount of nonsense from coroners and their juries which is most astonishing.

The thing which an English practitioner hates above everything is a coroner's inquest upon any incident in which the conduct of his own practice is concerned and may be called in question. Coroners seem always fond of making public inquiry into cases of death under an anæsthetic, as there seems to be ingrained in the public mind, from the ridiculous misrepresentations they see on the stage and read of in novels, that anæsthetics may be used for purposes of rape and robbery. Every such death is, therefore, blazoned abroad until the use of chloroform has become a *bête noir* of surgical practice alike for practitioner and patients. Chloroform, when it kills, which it does very rarely, kills on the instant, and, in England, there is an inquest. When ether kills, which it does far more frequently, it kills some days after its administration, and there is no inquest, not even an inquiry. In Scotland there are no coroners and no inquests, and as it is universally known and believed there that chloroform is far safer and better than ether, the former is used and the latter is not.

To get over the difficulty, I began to use a mixture, and soon

found that it was a great advance over either of the two anæsthetics used separately. I vary the proportions according to age, increasing the proportion of chloroform from one-third to two-thirds rapidly after forty, and in case there is any suspicion of renal or pulmonary incompetency.

Twelve years' experience has driven entirely out of my practice all those disasters which ether brought into it. In a number of administrations, now amounting to a great many thousands, not a mistake has occurred, and alarms occur only where some new and inexperienced administrator will indulge in such fantastic tricks as pushing back the tongue by pressing up the jaw, or violating in some other foolish way the simple rules for administration laid down over forty years ago by Simpson, not one of whose methods has yet been surpassed.

I have also this advantage, that when compelled to operate with the assistance of some practitioner in the country, whose opportunities of administering an anæsthetic are few and far between, I hand him my anæsthetic, with the usual remark that it is an ether mixture; he goes to his work with confidence devoid of fear. If I told him that it was chloroform, his hair would stand on end, he would think of nothing but an inquest all the time, and I should never have the patient properly under from beginning to end of the operation. In fact, I should have all the elements of danger, as Simpson lays them down, arrayed against me.

Further, in discussing details of an operation with women patients, half of them want to know if they must take chloroform, because they are sure their hearts won't stand, and they have been told this, that, and the other. "Ether mixture, far better and safer than chloroform," settles the question and calms their morbid imaginations.

Perhaps you will permit me, in another letter, to reply to the third part of Dr. Byron Robinson's question concerning infection. Meantime, accept my assurances of respect and believe me yours sincerely,

LAWSON TAIT.

The Crescent, Birmingham, Eng., December 9, 1893.

REPORTS OF CASES.

CASES OCCURRING IN GENERAL PRACTICE.

BY E. N. NASON, B.A., M.B. CANTAB.

Case of Complete Inversion of Uterus; death from shock.

Mrs. S., a multipara, aged 36, was attended in her confinement by an ignorant so-called midwife. I received an urgent message, and on arrival found the woman dead. On examination I found the uterus completely inverted and the placenta lying by the side of the uterus, but not attached to it. There had been very little hæmorrhage. It is worth noticing that the woman had on a pair of rather tight stays and was sitting propped up in bed. The following facts were elicited at the inquest. The child was born naturally. The sister, who had been present with the "midwife" up to that time, left the room. Soon after cries were heard, and one witness stated that she heard the deceased cry out "leave me alone, you are killing me." The "midwife" positively denied that the deceased cried out at all, or that she in any way interfered with her after the birth of the child. On the sister's return a few minutes later, she found the deceased looking very pale, and her attention was drawn to something unusual (inverted uterus) lying in the bed. She gave some stimulant, but a few minutes later the woman died, probably from shock, as there was no hæmorrhage to speak of. The fact that such a condition might have occurred spontaneously, and that there was no *direct* evidence of the "midwife's" interference, prevented the Coroner from allowing the jury to return a verdict of manslaughter against the "midwife."

Poisoning by Tartar Emetic (200 grs.); Recovery.

On July 7th, at 11.15 a.m., C. C., aged 27, mixed for himself what he believed to be an effervescent draught. As he was very thirsty he drank it off before he noticed that it had a

peculiar taste and did not effervesce. He then discovered that instead of bicarbonate of soda he had taken tartar emetic. He passed his finger down his throat and succeeded in producing vomiting fifteen minutes after he had swallowed the poison. He kept up the vomiting with draughts of warm water. At 11.45 purging began, and at 1 p.m. he was found in a semi-conscious condition in the water-closet. His skin was bathed in cold perspiration; he was almost pulseless, and could not be got to answer any questions. He was at once carried to bed and hot bottles and blankets applied. At 1.45 p.m. strong tea and brandy were given freely, and a little later decoction of oak bark in considerable quantity. He soon rallied and was able to answer questions. (He vomited three times after being carried to bed, the third time about 4 p.m. From the bowels there was continually passing thick mucus which had much the appearance of boiled sago. He complained much of thirst. The purging did not abate till midnight, but neither in the stools nor the vomit was there any blood.) About 2 p.m. he began to complain of cramps in his legs and feet. Soon after the cramps became general, but were most distressing and painful in the position of the diaphragm and in the muscles of the neck. At 3.15 these cramps had become so violent that he lay almost unconscious, nearly pulseless, and with his extremities and the surface of his body cold, and was apparently dying. Brandy was now given very freely and soon produced a good effect. At 4.30 p.m. his pulse was 90 per minute, regular and fairly full. Respirations 28. At 5.15 p.m. he was warm and was sweating profusely, the cramps were subsiding, and he was able to express himself as feeling much better. At 6 p.m. he seemed so much better that the brandy was diminished in quantity and egg and milk, etc., given freely. At 4 a.m. he slept and did not wake till 7 a.m. Between 8 and 9 a.m. he passed about half a pint of coffee-coloured urine, the first passed since the morning before. After this the urine and motions became natural.

For two or three days he complained of general "stiffness,"

especially across the abdomen, and was very easily fatigued, but beyond this he had no further inconvenience. The amount of tartar emetic taken was subsequently estimated at not less than 200 grains.

A CASE OF STRYCHNINE POISONING
FOLLOWED BY ACUTE NEPHRITIS AND ASCENDING
MOTOR PARALYSIS.

BY S. HERBERT PERRY, M.B.

THE patient, a strongly built man of twenty-five years, was admitted to the General Hospital on September 27th, 1893, under the care of Dr. Rickards. He was then suffering from strychnine poisoning, having shortly before admission taken two threepenny packets of vermin killer in some beer. General spasms were occurring every few minutes, and were excited by touching the patient or by movement on his part, but were not of a violent nature.

The stomach was washed out and tannic acid injected by the stomach tube. A subcutaneous injection of ten grains of chloral hydrate was also given. Within five hours of the taking of the poison all spasm had passed off, and the patient was able to swallow within four hours of his admission to the hospital.

On the morning of Sept. 28th the urine was drawn off by the catheter, as the patient had not passed any since admission. It was found to contain albumen and blood, hyaline and blood casts being also present, but no granular or fatty casts. The patient also complained of aching pain and slight tenderness in the lumbar region of the back. Vomiting had occurred during the night,—and this persisted, after taking food, to the time of death, four days later. Small quantities of milk were given by the mouth, and nutrient enemata administered. During the following days the urine shewed signs of acute nephritis, was scanty in quantity, and had to be drawn off by the catheter. On the day following admission hiccough set in, and persisted

at intervals until death occurred. The temperature, which was 102.4° on admission, became normal on the third day and remained so afterwards.

On the morning of October 1st—four days after admission—the patient complained of complete loss of power in his lower limbs, and of much loss of power in his arms. He stated that on the previous evening he had noticed slight weakness in his legs. There was no tenderness over the spine, nor did he complain of pain in any part of the body. Sensation was not impaired as regards touch or pain. By mid-day there was complete loss of movement affecting the upper and lower limbs and the intercostal muscles, the diaphragm acting well. The action of the heart was regular but thumping. Rhonchi and coarse râles were audible over both lungs generally. The knee-jerks and superficial plantar reflexes were absent on both sides, the abdominal and epigastric reflexes being present. There was from first to last no paralysis of the face, ocular muscles, or soft palate. The pupils were equal and reacted to light and accommodation. Faradic reaction was slight in the muscles of the legs; more marked in the thigh muscles; and well marked in the muscles of the trunk, arm, and forearm.

The general condition of the patient became steadily worse during the morning of October 1st, and the dyspnœa more obvious. The patient was throughout quite conscious and in evident dread of impending death. About 1. p.m.—during a paroxysm of dyspnœa—power of movement of the arms was suddenly regained to the extent of throwing them about, but inability to grasp anything remained. This condition persisted, and the patient eventually died at 4.30 p.m. in a state of asphyxia, with great dyspnœa and cyanosis. Shortly before death a return of movement was noticed in the upper intercostal muscles to a distinct extent.

At the *post mortem* examination the general signs of death from asphyxia were found. The kidneys were deeply injected and congested, but shewed no signs of chronic nephritis. The spinal cord on naked eye examination appeared healthy, and

a microscopic examination made by Dr. Stanley shewed no evidence of any lesion. The previous history of the patient was good, and at the time of the attempt on his life he appears to have been in good health. There was no evidence that he suffered from renal disease previously. The obvious question is as to whether the motor paralysis was due to the strychnine poisoning or to the renal condition ; and if due to the nephritis, was this caused by the strychnine ? The return of power in the upper intercostals and in the muscles of the arms points against any organic lesion. The symptoms of strychnine poisoning were never very serious, and in addition to after treatment were treated before the patient was brought to the hospital. Dating from the time when the weakness of the legs was first noticed, the total duration of the paralysis was about 22 hours. The patient was confident that he was in good health at the time of taking the vermin killer, his reason for doing this being apparently some anxiety concerning his business. The most reasonable explanation would seem to be that the nephritis was caused by the strychnine, and that the paralysis was of uræmic origin. Might exhaustion of the spinal centres, following on over stimulation by strychnine, have assisted in the causation of the paralysis ?

AN UNUSUAL CASE OF HEMIPLEGIA.

BY JAMES W. RUSSELL, M.A., M.D. (CANTAB.), M.R.C.P. (LOND.)

The following case presents two somewhat unusual features :—

James G, aged 48, a provision dealer by trade, was admitted into the Birmingham General Hospital, on March 20th, 1894, and in Dr. Simon's absence, came under my own care. The family history contains no point of importance. The patient has himself had typhoid fever and small pox, and has twice suffered from gonorrhœa ; but no history suggesting syphilis can be obtained either from him or his wife. He has had fourteen children.

The present illness is supposed to date from a fall, a month before admission, in which, however, his head was not injured, and from which no bad effects were noticed beyond slight pain in the back. About a week later, he had, one evening, an attack of twitching in his right arm, which lasted half-an hour, and then passed off, leaving no ill effect behind. The next night when in bed, he suddenly became convulsed, the convulsions affecting the whole of the body. When these ceased, he was quite unconscious and remained so for two days, at the end of which time consciousness very slowly returned. He was then found to be completely paralysed on the right side of the body, and to be unable to speak (?). He has since recovered some slight power of movement in the arm, and speech has returned, but the leg has remained completely paralysed.

On admission he was found to be a well-developed man, but looked distinctly old of his age. The respiratory and alimentary systems were normal. The pulse was regular and full; but the tension was undoubtedly slightly raised and the arteries somewhat thickened. The apex beat was within the vertical nipple line, and the heart sounds unaltered and free from murmur. The urine also was found to be normal; the specific gravity varied from 1026 to 1015, albumen was absent, and no casts were at any time discovered.

Nervous System.—The right arm was extremely weak and movements very deficient; but there was by no means complete loss of power. The right leg was absolutely paralysed; and when asked to move it, the patient complied only by using his sound limb for the purpose. Speech was a little indistinct, but there was no suggestion of any true aphasia. The two sides of the face scarcely differed from one another, and there was no ocular paralysis.

In testing sensation, it was difficult to come to any very definite conclusion, owing to the dull mental condition; but it may safely be stated that tactile sensibility was very markedly diminished in the leg, but comparatively slightly so in the arm. Sensation of pain was delayed, but was certainly less deficient at

first than that of touch. Distinction between heat and cold, though slow, was certain, so long as the degree of heat was considerable ; simple warmth was not distinguished from cold.

The mental condition was generally dull, and one unusual feature needs to be noted. There was marked loss of sense of position in the leg, unless seen by the patient. When moved by the observer in any direction, he was quite unable to locate its final position, or to tell in which direction it was being moved.

The sight was somewhat dim ; there was however, no hemianopia. The fields of vision were not mapped out. On examining the discs, there was found to be intense double optic neuritis.

The course of the case was one of slow general improvement, and on his discharge, on April 15th, the patient had regained a considerable degree of power in both arm and leg, though he was still unable to stand. The knee-jerk on the affected side was becoming exaggerated, and there was slight ankle clonus. Sensation had greatly improved, but was still somewhat delayed, and localisation of touch remained imperfect ; sense of position was entirely recovered. When last examined, the optic neuritis had scarcely diminished in intensity.

There are two unusual points in this case.

In the first place, loss of sense of position in a limb, though by no means an unobserved condition, is usually supposed to be dependent upon disease of the cortex, and probably of that part of the motor area which corresponds to the limb affected. Dr. Gowers, however, notes that he has seen it very distinctly present "in disease of the central ganglia." In my own case, the seat of the lesion is pretty clearly defined. The occurrence of well-marked hemianæsthesia, together with the recovery of power in the arm before the leg, shows conclusively that the lesion, whatever its nature, affected the *posterior* or "ventriculo-optic" group of arteries arising from the middle cerebral, and supplying the anterior part of the optic thalamus and neighbouring parts of the internal capsule.

A much more unusual feature is the occurrence of double

optic neuritis. According to Dr. Gowers, optic neuritis "scarcely ever results from cerebral hæmorrhage, or from thrombotic softening; but it has been several times observed in cases of softening from embolism, when the source of the obstructing plug was acute endocarditis." "It has also been met with in a case in which the microscope revealed general slight inflammatory changes—diffuse cerebritis." In this case, neither of these conditions was present, and although the diagnosis of granular kidney cannot be made in the face of the indefinite cardiac and urinary signs, still the condition of the arteries, together with the old appearance of the man, lead me to believe that the case was probably one of hæmorrhage. On the other hand, perhaps the preliminary attack of twitching would point rather to the diagnosis of thrombosis. In the absence of a *post-mortem* examination, however, this point cannot definitely be decided. I could discover no general constitutional cause for the neuritis.

PERISCOPE.

SURGERY.

BY WILLIAM F. HASLAM, F.R.C.S.

Complete Dislocation of the Patella, reduced by Arthrotomy after six years.—By John W. Perkins, M.D. (*Annals of Surgery*, December, 1893).—Annie R., aged twenty-six, first dislocated her patella outwards in 1881, when it almost immediately slipped back. Shortly after this the dislocation was repeated, and was again reduced by muscular action, leaving the knee "weak and uncertain." A year after the first injury the knee gave way while she was going down some steps, and she fell, doubling the leg violently under her and dislocating her patella further out of line than it ever had been before. Reduction was

attempted but could not be effected, and she had a synovitis for many weeks. The limb, when she got about again, was practically useless, as she could bear but little weight upon it. When seen in 1888 she was found to have a complete outward dislocation of the right patella, to the outside and behind the external condyle of the femur. There was a double rotation of the femur and tibia on their long axes; the femur was rotated inwards and the tibia outwards. The patella was very movable laterally, and came to the front of the external condyle during extension, but retired to the outer side and back of the outer condyle during flexion, in such a way as to allow the quadriceps extensor to act then as a flexor. An incision was made from the tubercle of the tibia, six inches upwards in the middle line. The joint was opened and the patella found to the outer side of the external condyle. It was not bound to it by adhesions, but was so firmly held by the outer part of the capsule that it required a four-inch incision to the outside of and parallel to the tendon of the quadriceps extensor and ligamentum patellæ to liberate it. The patella was then brought back to its place between the condyles of the femur, but even then its position to the tibia, owing to its rotation, was not normal, and though an attempt was made to correct this deformity by rotating the tibia outwards this was not possible and the wound was closed. Primary union occurred and recovery has been most satisfactory. When seen four years after the operation there had not been any recurrence of the dislocation, there was no excess of fluid in the joint, and the movements were free. The femur and tibia are in exact line, and there is no rotation. The patient was able to walk long distances without any limping or support whatever.

Fracture of the Patella (*Lancet*, January 27th, 1894).—The operative treatment of simple fracture of the patella was under discussion at the Medical Society of London at a meeting held on January 22nd, when Mr. Ballance shewed two patients on whom he had successfully operated for this injury. He uses a vertical incision placed laterally so as to avoid a scar over the

front of the patella, the fragments being held together by wire ; no drainage tubes were used, the joint being freely irrigated with 1 in 1000 perchloride solution and the wound dressed with cyanide gauze. He advises that for greater safety the operation should be done without assistance, the operator using the sponges and handling the sutures himself, and that passive movement should be begun in from ten to fourteen days. Mr. Watson Cheyne said that at King's College Hospital wiring was the only method of treatment adopted for simple fracture of the patella. He used wire and removed the dressing on the tenth day, took off the splint, and applied a collodion dressing. The patient was kept in bed for a week and encouraged to bend the leg. At the end of another week he was allowed to get up and walk about the ward, and to go home at the end of six weeks. Mr. Bruce Clarke thought it better to wait for six weeks before commencing passive movement.

Successful Reduction of a Cervical Dislocation. By G. L. Walton, M.D. (*Boston Medical and Surgical Journal*, December 7th, 1893).—A boy, ten years of age, fell from a shed about a week before his application to the hospital. His head was bent towards the right shoulder, the face turned to the left, and the chin somewhat elevated, the position being that of torticollis from spasm of the right sterno-mastoid. This muscle was however lax, while the muscles on the left side of the neck were put on the stretch. He could not voluntarily straighten the head, although it could be forced around so that the face pointed forward, but immediately relapsed when left to itself. There was a hollow over the spinous process of the fourth or fifth cervical vertebra. There was no paralysis of motion or sensation in either extremity, and no other abnormality except the displacement of the neck. There was no special complaint of pain except on lying down, which was practically impossible. The patient was etherised, the vertebræ first unlocked by bending the head diagonally backwards and towards the left, then rotated into place. No force was required, and reduction was immediate and complete. The patient made a good

recovery. Dr. Walton regarded this as an example of the complete form of unilateral dislocation, the right articular process of one vertebra slipping forwards and falling down upon the pedicle of the vertebra below, a displacement rendered easy by the comparatively horizontal position of the articular processes in the cervical region.

Bilateral Dislocation of the Inferior Maxilla of 136 days' standing.—In the *Annals of Surgery* for February, 1894, Dr. Charles A. Powers records the case of a girl, aged 17, who came to him 136 days after she had sustained a bilateral dislocation of the inferior maxilla. The signs were well marked, and reduction was effected with difficulty under ether, the manipulation lasting for twenty minutes. After reduction the lower incisors still rested a little in front of the upper, apparently from some thickening of the glenoid cavity.

The Treatment of Angular Deformities at the Hip-joint.—By Reginald H. Sayre, M.D. (*British Medical Journal*, Dec. 2, 1893).—Dr. Sayre finds “that many of the distortions following hip disease, which are supposed to be due to contracture of the tendons around the joint, are in reality retained in place to a greater extent by the adhesions about the capsule and between the bones, and that in many cases the cutting of the tendons alone will be insufficient to allow reduction of the deformity.” He is of opinion that “it is a simpler and safer operation in many cases to do a subcutaneous osteotomy below the trochanter than to endeavour to cut, either subcutaneously or through an open incision, the adhesions which bind the joint in its distorted position; and that it is very easy to be mistaken in regard to the presence of movement in a joint.” Dr. Sayre concludes his paper as follows:—“In regard to the choice between osteotomy or *brisement forcé* a good deal must be left to the judgment of the operator and the condition of each individual case, and there are certain cases where I believe the dangers of re-exciting inflammation in the joint by *brisement forcé* are so great that I think it is safer to do an osteotomy, and if the joint is to be broken up, I believe in making section of all constriction bands

which can be safely cut, breaking up the adhesions thoroughly under an anæsthetic, placing the limb at once in the required position, and then keeping the parts absolutely at rest until all pain, swelling, and tenderness have subsided ; and I find benefit in many instances from diminishing the blood supply to the joint by means of moderate compression over the artery supplying it with blood. After the joint is completely free from pain slight motion should be given every day to restore to function, but never carried to the point of producing pain or tenderness which will last as long as twenty-four hours. If your efforts to restore function are followed by increased heat or tenderness, cease your manipulation, and be content with the improved position and a stiff joint. If, however, there is slight motion in the joint and the employment of gradual manipulation and massage is not followed by inflammatory reaction, continue the procedures daily, increasing in force and frequency as experience warrants, and in many instances you will be able to cause absorption of inflammatory deposits, break down old adhesions, and restore excellent motion to joints which have been considered useless for months and sometimes for years."

Resection of the head of the Humerus for luxation.—In the *Clinical Journal* for Feb. 28th, 1894, Mr. Edmund Owen draws attention to some of the conditions which render this operation necessary, and gives notes of some cases.

The first, that of a stout woman, aged 42, the dislocation had existed for two months, and as all attempts to reduce it failed an incision was made and the displaced head excised.

In the second case the head was removed for recurring dislocation. The patient, a man aged 25, had been subject to epileptic fits from the time he was 16. The first dislocation occurred about five years ago during one of the fits, and it has happened about twenty times since then. Excision was performed and the result was very satisfactory.

The third case was one of fracture through the anatomical neck with dislocation. The patient, a woman aged 40, tripped and fell six weeks before admission. Excision below the tuberosities gave a good result.

Mr. Owen concludes his lecture as follows:—"Obscure injuries to the shoulder should be examined under an anæsthetic, and without delay. It is easy to overlook a dislocation of the humerus, and especially so in a stout woman. Old-standing dislocations should be treated with great discretion, as violence may entail a fatal result. A clean incision on to the bone is not a serious operation, and either with or without resection of the end of the bone, it may give a very serviceable joint." He regards any dislocation of the shoulder that has existed over eight weeks as "old-standing."

DISEASES OF THE THROAT, NOSE, AND EAR.

BY F. MARSH, F.R.C.S.

Malignant Disease of Larynx.—*Discussion with especial reference to the present position of the question of radical operation.*—Report of proceedings of the Laryngological Society of London in *The Journal of Laryngology*, Jan., 1894.—Mr. Butlin said that the most favourable cases for operation are those in which the disease is of intrinsic origin, and still limited to the interior of the larynx, is of small extent, uncomplicated, and particularly in which it lies towards the front of the larynx. The more he had seen of the operative surgery of malignant disease of the larynx, the more convinced he was that the removal of the whole or large parts of the larynx for malignant disease was seldom followed by sufficiently good results to justify the operation. The best results had followed and were likely to follow thyrotomy with very free removal of the soft parts in the interior of the larynx. Such thyrotomies were comparatively free from danger. He removed Hahn's tube directly the operation was over, and made no attempt to close the wound. Iodoform was frequently applied to the wound; to this he attached much importance. The patient was placed in the recumbent posture on his side with the head low. Nutrient enemata were given

during the first few days, but on the day after the operation an attempt was made to give fluids by the mouth, water being tried first. He had not lost a case of thyrotomy since he had employed these measures.

Dr. Semon agreed practically to everything Mr. Butlin had said. He wished to emphasise the desirability of *early* diagnosis and *early* operation. Of 100 cases in private practice, in only about 10 per cent. had he felt justified in advising a radical operation, and, broadly speaking, 50 per cent. of those operated upon had been successful, recurrence not having as yet taken place. The methods of operation selected in these cases had been (1) partial extirpation of the larynx; (2) sub-hyoid pharyngotomy; (3) thyrotomy with and without resection of parts of the cartilaginous framework.

Intubation and Tracheotomy.—Ranke (München).—The results of the collective investigation of the Deutsche Gesellschaft für Kinderheilkunde (*Münchener Med. Woch.*, 1893 No. 44 *Journal of Laryngology*, Feb., 1894. Michael).—In four years 1,324 cases of diphtheria and laryngeal stenosis have been treated by intubation, with 516 cures (equal to 39 per cent.). The method is only applied in cases of severe stenosis. It is applied to all degrees of age, and in the youngest children. Of secondary diphtheria, following measles and scarlet fever, 121 cases have been treated, with 27 cures (equal to 22 per cent.). In the first year of life 93 cases have been treated, with 13 cures (14 per cent.); in the second year of life 295 cases, with 92 cures (32 per cent.). Of 1,324 cases of intubation, in 242 cases it was necessary to perform secondary tracheotomy, with 20 cures (8 per cent.); 58 cases with secondary diphtheria and secondary tracheotomy all died. The author also refers to the results of Prof. Wiederhofer, of Vienna, who has treated with intubation 147 cases; with intubation and secondary tracheotomy 69 cases; with tracheotomy alone 58 cases. Of these 274 cases 146 have been cured (53 per cent.).

Of 1,118 cases treated by tracheotomy, 435 have been cured (39 per cent.). Of 42 cases of secondary diphtheria, 11 have

been cured (26 per cent.). In primary diphtheria both methods gave exactly the same results, *i.e.* 39 per cent. cures. For both the first years of life the results of intubation are better than those of tracheotomy.

The author concludes that the result of the investigation has shewn that intubation is of undeniable value. Secondary tracheotomy gives bad results, and should only be performed exceptionally. It will be indicated if sudden asphyxia arises during the presence of the intubation tube in the larynx, which cannot be cured by removal of the tube.

The Treatment of Laryngeal Tuberculosis.—Semon (*Lancet*, March 11, 1893) strongly advises internal use of pine creosote in the treatment of laryngeal tuberculosis. He rubs lactic acid into the ulcerated areas with cotton armed probes, and granulative tissue he scrapes away with Krause's or Heryng's curettes, previous to the application of lactic acid.

Heryng (*Journal of Laryngology*, Aug. 1893,) in an able paper upon the surgical treatment of laryngeal phthisis remarks that the harmful theory of the incurability of laryngeal phthisis is now exploded. The main indications in the treatment of laryngeal phthisis are (1) to relieve suffering; (2) to prolong life; (3) in favourable but exceptional cases, to bring about perfect healing in the larynx and a restoration of its functions. Curettement is indicated specially in cases of circumscribed, slowly developing tubercular infiltrations, even although they shew no tendency to break down. The object here is to prevent the further inevitable destruction of a vital organ by destroying the centre of infection.

Castex (*Soc. of Laryn.*, Paris, May, 1893; *The Journal of Laryngology*, Jan., 1894,) considers surgical intervention in laryngeal phthisis justifiable in the following conditions:—(1) Where medical treatment is inefficient; (2) where indicated by local conditions; (3) when not contra-indicated by the general condition.

The Treatment of Tuberculosis of the Larynx and Lungs by means of subcutaneous injections of Thiosinamin.—Sendzall,

Warsaw, (*Journal of Laryngology*, Mar., 1894.)—The following conclusions are arrived at:—(1) Thiosinamin, subcutaneously applied, can, in certain cases, have a positive influence upon the course of the tubercular process in the larynx; (2) upon the tubercular process of the lungs thiosinamin seems not to have any positive influence, or even to produce a negative effect; (3) also upon the general condition in most cases this drug does not act satisfactorily; (4) in lupus of the nose thiosinamin, like tuberculin, can, Hebra asserts, be applied with comparatively great advantage; (5) this drug seems not to produce general reaction, which, as is known, was the weak point of Koch's remedy, but it must be applied with certain precautions in tuberculosis of the lungs and larynx. Finally, the opinion is expressed that thiosinamin, so warmly recommended by Hebra in laryngeal and pulmonary tuberculosis, will share the same lot as its antecedents—Koch's tuberculin, Kleb's tuberculoidin, and Liebreich's cantharidinate of potash—*i.e.*, it will be lost in oblivion.

The Pathological and Clinical Features of Atrophic Rhinitis.—

Report of discussion at the last meeting of the British Laryngological and Rhinological Association (*Journal of Laryngology*, Feb., 1894).—In opening the discussion Mr. Wyatt Wingrave read a valuable paper based on a careful systematic investigation of sixty cases. In addition to the more generally recognised symptoms he noted that in no less than 56 of the cases the tonsils had entirely disappeared, and that there was also well-marked atrophy of the pharyngeal and lingual tonsils. Microscopical specimens were exhibited shewing the presence of special hyaloid bodies and pigment masses. The hyaloid bodies consisted of small refractive, rounded homogeneous masses, imbedded for the most part in the interlobular tissues of the glands and in the adjacent lymphoid tissue, but were also seen amongst the surface stratified epithelium. In the early stages they exist as small spheroidal masses about $\frac{1}{2000}$ in. diameter, gradually increasing in size to $\frac{1}{800}$ in. At a later stage a complete change could be demonstrated—they seem to break up into minute

refractile bodies resembling spores imbedded in a transparent matrix. The paper as a whole was in favour of the view that atrophic rhinitis is a specific disease.

The majority of subsequent speakers, viz., Mr. Lennox Browne, Mr. Mayo Collier, and Mr. F. Marsh, were inclined to attach most importance to changes in the sympathetic ganglia and nerve fibres supplying the parts, as a primary etiological factor.

REPORTS OF SOCIETIES.

BRITISH MEDICAL ASSOCIATION.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

PATHOLOGICAL AND CLINICAL SECTION.

The fifth meeting was held on Friday, March 30th, at 8 o'clock, the chairman, Mr. BENNETT MAY, presiding.

Bilateral Peripheral Facial Paralysis.—Dr. Suckling shewed a woman with paralysis of the muscles on both sides of the face, due to peripheral neuritis of both facial nerves. The patient was aged 51, and was a twine dresser. In her work her face was constantly exposed to steam. She first noticed that she could not taste or masticate properly, and the following day found that she could not close her eyelids. The soft palate was not affected. The reaction of degeneration was well marked on both sides. There was no optic neuritis or any symptom of cerebral mischief. Dr. Suckling considered that the case was one of bilateral Bell's paralysis, both sides of the face having been exposed to steam.

Inherited Syphilis.—Dr. Sinclair shewed the following case. A lad, æt. 18; subject of inherited syphilis. When first seen, July, 1893; double optic atrophy; Argyll-Robertson pupils; knee jerks almost lost on both sides; no incoördination nor lightning pains; no loss of sexual power; suffers from excessive

drowsiness at times. When seen four months later; pupils small, motionless to light and only the slightest contraction with accommodation; the knee-jerks readily elicited on both sides equally; no incoördination. At present time, condition not much changed; vision deteriorated; knee jerks readily brought out on both sides; no incoördination nor pains; pupils as before.

Chief points of interest: (1) The occurrence of central nervous degeneration in *inherited* syphilis; (2) the marked improvement in the knee jerks.

Cystic Mammary Tumour.—Mr. Barling shewed a large cystic adenoma with papillomatous growths nearly filling the cyst, removed from the left breast of a lady aged 38. The breast was nearly as large again as its fellow, and the patient's attention was attracted to the condition merely by the weight of the organ. The nipple was free, there was no adhesion to skin or pectoral fascia, parts felt cystic, but there was no discharge from the nipple, and glandular enlargement was absent.

Uterine Myomata.—Mr. John W. Taylor shewed two specimens of uterine myoma removed by hysterectomy. One of these, while quite hard naturally, possessed two central cystic cavities which at the time of operation were filled with an inodorous yellow fluid resembling pus.

The tumours were removed by Mr. Taylor's modification of the usual clamp operation, in which the transfixion-pins are passed through the parietal peritoneum as well as through the pedicle of the tumour, the clamp being applied below these and therefore outside the peritoneal cavity. Mr. Taylor's remarks on the operation were illustrated by diagrams.

Tubercular Ulceration of Intestine.—Dr. Stanley shewed the large intestine and vermiform appendix from a man aged 23, who died of tubercle of lungs and intestine. There was extreme tubercular ulceration of the ascending and part of the transverse colon, the surface of which was covered by an almost continuous tubercular deposit. In the lower part of the ileum were ulcers also, but not in any quantity. The appendix was greatly distended and hung down towards the pelvis. On

being opened it was found to contain a muco-purulent fluid, and there was general tubercular ulceration of the whole of its mucous surface. The valve was patent, but apparently the organ was unable to empty itself from the downward and curved position it had assumed.

Professor Allen shewed sections of a testis removed by Mr. Christopher Martin from a supposed hermaphrodite.

Mr. Morrison shewed a specimen of cystic diverticulum from the axillary vein; and a specimen of dilated bladder and ureters with granular kidneys, for Dr. Kauffmann.

MIDLAND MEDICAL SOCIETY.

A meeting of this Society was held on Wednesday evening, March 21st, at the Medical Institute, Mr. A. H. EVANS, the President, in the chair.

Cyst of Thyroid.—Mr. F. Marsh shewed a young woman, æt. 26, from whose thyroid he had, three weeks ago, enucleated a cyst the size of a small hen's egg. She had had some parenchymatous enlargement of the thyroid for two years, which under treatment had almost disappeared, but a cyst had developed in the right lobe and was slowly increasing in size. There were no pressure symptoms. No difficulty was experienced at the time of operation; there was no hæmorrhage to speak of, although the cyst over a small area on its deeper aspect was incorporated with gland structure. The scar was hardly noticeable, as the wound had healed by primary union, and the line of incision was parallel to the anterior margin of the sterno-mastoid.

Mr. George Heaton shewed a boy, aged 12, the subject of otitis media purulenta, who whilst under observation had had symptoms pointing to rupture of an intracranial abscess into the right tympanum.

Mr. E. Luke Freer read a paper, consisting of Notes on the scope of Orthopædics in the Treatment of Deformities, and the

relation to Surgery. He insisted on André's original derivation of the word from *ορθος*, straight, and *παιδευω*, I train, as the basis of the true principles of Orthopædy. He divided deformities into three classes—1st, primarily Orthopædic, as non-carietic spinal deformities, talipes and other contractures, knock-knee, bow-leg, etc.; 2nd, secondarily Orthopædic, as morbus coxæ, spondylitis and other carietic deformities, paralytic and cicatricial deformities; 3rd, Anorthopædic, or deformities not applicable for treatment by orthopædic principles, as cleft-palate, hypospadias, epispadias, herniæ and other tumours. He dwelt on the necessity for definite, regulated, and continuous kinetics with correction of postural habits in scoliosis; on the daily manipulations and removable retentive apparatus after tenotomy, as opposed to plaster and wrenching, in talipes, reserving tarsectomy to a small percentage of relapsed cases; on early physiological rest, and later, light kinetics in carietic diseases; on massage with kinetics in paralysis, and on applied mechanics followed by small plastic operations as opposed to early operative interference in cicatricial deformities. He shewed a number of cases and photographs illustrative of the principles advanced, and also tenotomes and other instruments used.

Dr. Biggam read a paper on poisoning by carbonic acid gas. The history of the cases was given in detail. There was a row of four houses, all of whose inmates suffered from symptoms of poisoning except one. The gas proceeded from disused coal workings. The onset was sudden. Those occupying the ground floor were first attacked. The leakage was found to come through the wall of an outhouse. The symptoms complained of and noticed were intense headache, giddiness, nausea and vomiting, gastric pain, and in two cases diarrhœa. The *post mortem* appearance was a diffuse rosy red discoloration of the sides of the thorax and arms, neck and back, and back of the thighs. Marked congestion of bronchi and lungs. The right side of the heart was filled with dark clots, the left side contained a little fluid blood. The liver, spleen, and kidneys, were all intensely congested, the stomach and brain not so.

A meeting of the Midland Medical Society was held on Wednesday, April 4th, the President, Mr. A. H. EVANS, in the chair.

Mr. E. L. Freer shewed a boy with severe rachitic curvatures of the lower extremities.

Congenital Malformations.—Mr. William Thomas exhibited three cases of congenital malformations. In the first, an infant eight months old, the right foot was the subject of talipes equinovarus. In the left foot the great toe was almost absent, and appeared to have been obliquely sliced off and the tip of the stump united to the next toe; the other toes were somewhat rudimentary. In the lower third of the leg a deep groove completely surrounded the limb, causing a permanent constriction. The groove, and perhaps to some extent the malformation of the toes, were apparently due to constriction by the umbilical cord during intra-uterine life.

The second case was also an infant eight months old, in which the right foot was uniformly swollen and oedematous, giving an appearance of elephantiasis to the limb. The left arm and fore-arm were perfect, but the whole of the hand was rudimentary, being represented by a small stump with the rudimentary fingers and thumb hanging from its extremity.

The third case was somewhat similar to the last, but the patient was a boy nine years old. Only about the upper third of the left fore-arm was present. The upper end of the ulna articulates normally with the humerus, but the head of the radius moves freely over the capitellum. Both bones appear fused together about two and a half inches from the elbow, and a rudimentary thumb and four rudimentary digits are attached to the extremity. There is a slight amount of voluntary movement in the digits.

Dr. Fairley shewed a fœtus from a case of placenta prævia. The specimen had severe talipes varus of the left foot. The right leg had been amputated in utero at the junction of the middle and upper third of the thigh. It was the fifth child, and all the previous ones had been well-formed and healthy.

Mr. Christopher Martin then read a paper on Painful Menstruation; its Causes and Treatment. — Introduction: Dysmenorrhœa a symptom of many lesions, not a disease in itself. Division of cases into two groups: (*a*) uterine, (*b*) extra-uterine. Causes of the pain: (1) congestion, (2) spasms, (3) neuralgia. Treatment:—Domestic remedies; anodynes; the abuse of alcohol and opiates. Indications for surgical interference; dilatation; conservative operations on the appendages; removal of the appendages. The influence of marriage.

REVIEWS.

TWO GREAT SCOTSMEN: THE BROTHERS WILLIAM AND JOHN HUNTER.*

WE imagine that in writing this book Dr. Mather has been engaged in a labour of love, and that the subjects of his biography have to him a vivid and almost heroic personality. The desire to impart his enthusiasm to others, and to make known, especially in Scotland, the immense benefits conferred on mankind by the labours and genius of these two "great Scotsmen," has resulted in the production of a book which is both well written, and at the same time most attractively printed, bound, and illustrated. Perhaps it is too much to hope that the lay public will take much interest in the book, although all technicalities have been as far as possible avoided; but by members of the medical profession, the majority of whom have probably but a vague idea of the work and discoveries of these two men, it should be widely read.

Descended from an ancient family, William and John Hunter were born on a small farm at Long Calderwood, in Lanarkshire,

* Two Great Scotsmen: The Brothers William and John Hunter. By George Mather, M.D., F.F.P.S.G. Glasgow: James Maclehose and Sons. 1893.

seven miles from Glasgow ; the former on May 23rd, 1718, the

MIDLAND SCHOOL OF MASSAGE.

Courses of Lectures are held every six weeks throughout the year in the PRINCIPLES AND PRACTICE OF MASSAGE AND KINESI-THERAPEUTICS.

Demonstrations and Practical Work daily. LECTURES—Tuesdays and Fridays.

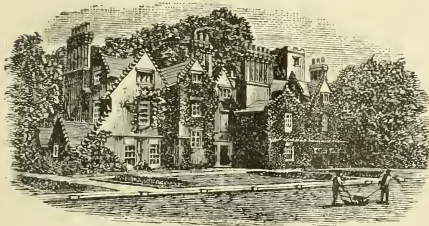
The next course will commence on June 5th.

For syllabus and all particulars apply to M. BERESFORD, Superintendent, 31B, Newhall Street.

Experienced Masseurs and Masseuses are always available for Private Patients in separate rooms or at their own homes.

THE MOAT HOUSE, TAMWORTH, STAFFORDSHIRE.

STATIONS L. & N. WEST. and MID. RAILWAYS.



The House stands in grounds of ten acres (within 5 minutes' drive of either station), and is devoted to the care and treatment of a few Ladies suffering from nervous and mental disorders, who enjoy the comforts, privacy and occupations of home life. Voluntary patients are received without certificates.

Resident Proprietors—J F. WOODY, M.R.C.S., and E. HOLLINS, M.A. Camb.

Medical Attendants—J. HOLMES JOY, M.A., M.D., and S. H. HARRISON, L.R.C.P. Lond.
both of whom reside close to the gates.

FOR TERMS, ETC., APPLY TO PROPRIETORS.

March 30th, 1783.

William Hunter's great aim, almost from the very beginning

Mr. Christopher Martin then read a paper on Painful Men-

MIDLAND SCHOOL OF MEDICINE

seven miles from Glasgow ; the former on May 23rd, 1718, the latter on February 13th, 1728, according to the parish register—or according to his own statement, on February 14th, this being the date which is commemorated by the delivery of the annual Hunterian Oration at the Royal College of Surgeons. Out of a large family three others only survived infancy ; namely, an elder brother, a youth of great talent and promise, who died prematurely of phthisis, and two sisters, one of whom became the mother of Sir Walter Scott's well-known friend and correspondent, Joanna Baillic.

William, the elder of the two great Hunters, seems to have been from the first a "precocious boy," and was originally destined for the Church. At the age of 13 he entered the University of Glasgow, where he studied for a period of five years, and then attempted, though unsuccessfully, to obtain employment as a schoolmaster. About this time he made the acquaintance of Dr. William Cullen, a man who afterwards acquired a great reputation, not only as a teacher and leader in the University of Glasgow, but also as a physician and man of science. From him William Hunter derived the impulse which led him to join the medical profession ; and to him and to the brothers Foulis, the celebrated Glasgow printers, he undoubtedly owed much of his scientific and artistic leaning. In the year 1741 he took up his residence in London, where he became a surgeon's pupil and dissector in St. George's Hospital. In 1746 he began to lecture on anatomy ; and from this time onwards grew steadily and rapidly in fame, both as a lecturer, in which art he is said to have been without a rival, and also as a practitioner, first of all in medicine, and later in midwifery only. In the latter capacity he speedily acquired a large income ; and after holding many posts of eminence, amongst which may be mentioned those of President of the Royal College of Physicians of London, and Physician Extraordinary to Queen Charlotte, wife of the then reigning king, George III., he died at the age of 66, on March 30th, 1783.

William Hunter's great aim, almost from the very beginning

of his medical career, was to establish a school of anatomy in London; and to that end his magnificent museum, probably the first medical museum ever formed, was collected. A request made to the Government of the day, for the grant of a site on which to build an anatomical school at his own expense and in which to house his museum, having been coldly rejected, the latter was bequeathed to the University of Glasgow, where it is still to be seen in its entirety. This museum, moreover, besides a priceless collection of anatomical and pathological specimens, contains departments devoted to art and natural history, and an unrivalled collection of ancient coins, all gathered together by the same hand. Of Hunter's numerous contributions to the science of medicine, perhaps the best known and greatest is his book on the "Anatomy of the Human Gravid Uterus"; but the list of his original works is a long and notable one.

The early career of John Hunter forms a marked contrast to that of his elder brother. Strange as it may seem, especially in the case of a Scotch lad, it is a fact that at the age of seventeen he was able neither to read nor to write; and this defect in his early education, though supplied to a great extent by hard work in after life, yet left its mark in a certain roughness of literary style, and effectually prevented him from attaining to that ease in the art of lecturing which was one of his brother's most notable gifts.

In the absence of such necessary attainments for the entrance into any of the learned professions, John Hunter was for three years apprenticed to a cabinet-maker in Glasgow, and it was not till the year 1748, that he followed his brother to London, where he became at once his most able assistant in the dissecting room, and shortly afterwards entered as a medical student at the Chelsea Hospital, St. Bartholomew's, and St. George's Hospitals in succession. We are told that in his capacity as assistant and partner in his brother's school of anatomy, he was forced to associate himself with those somewhat undesirable companions known as the "resurrectionists";

and, partly to this fact, partly to his original lack of education, is attributed a touch of coarseness in his nature which was apparent at times throughout life. From the first, John Hunter's leaning towards surgery was plainly evident ; and though against his brother's wish, he finally decided to devote himself to this branch of the profession.

In 1761, having been prostrated by an attack of pneumonia, he joined the army as a surgeon and saw much active service in the Peninsula, where he collected the materials for one of his most celebrated works, namely, that on gunshot wounds. In 1763, he returned to London, determined to make a reputation for himself as a surgeon. After a long and uphill fight, his ambition was gratified by the acquirement of a large surgical practice. With this came a correspondingly large income, and the means by which he was enabled to devote himself to those investigations into pathology and physiology in their bearings on the practice of surgery, on which his fame largely rests ; and to the establishment of that great museum which is now housed in the buildings of the Royal College of Surgeons. The latter years of his life were embittered by frequent attacks of angina pectoris, to which disease he succumbed in October, 1793, after a somewhat heated discussion at St. George's Hospital, of the staff of which institution he had long been a member.

A list of the published works of John Hunter, as well as of those of his brother, is placed at the end of the book which we are reviewing, and from which the above facts are quoted. Probably its chief and best known item is the work on "The Blood and Inflammation," and, secondly, that in which the application of a ligature in cases of aneurism at a distance from the seat of disease was first described and advocated ; but it includes almost equally celebrated works on Venereal disease and Diseases of the Teeth, besides numerous contributions to the science of comparative anatomy.

It can scarcely be denied that the study of the lives of these two men is worth the time bestowed upon it, and in Dr. Mather's book this study will be found a very attractive one.

In Memoriam.

DICKINSON WEBSTER CROMPTON, F.R.C.S.

THE death of Mr. Dickinson Crompton on Saturday, March 31st, has removed one who was for many years a leading figure in the professional life of Birmingham. Mr. Crompton was, on the day of his death, exactly 88½ years of age; but, although it is now some years since he retired from practice, his name at least was still well known even to most of the younger members of the profession, and his death will be regretted by them as well as by those who were less widely separated from him in age.

Born in Birmingham on September 30th, 1805, and educated chiefly at a private school at Woodville, near Sandwell—for his Unitarianism was a bar to his admission into any public school—he was apprenticed to Richard Wood, who was at that time Senior Surgeon to the Birmingham General Hospital and a noted operator, especially for stone. During four years, Crompton lived in Mr. Wood's house, helped him in nearly all his private operations, and worked as his dresser at the General Hospital. In 1828 he entered at Guy's Hospital, and subsequently studied in Paris. In 1834 he took the Jacksonian Prize of the Royal College of Surgeons for a work on Diseases of the Nose and Face. Returning to Birmingham, he began practice on his own account, and was in succession appointed Surgeon to the Birmingham General Dispensary, to the Eye Infirmary, and lastly, in 1843, to the General Hospital, which latter post he held until his resignation in 1868. He remained, however, very actively engaged in private practice some years longer, his remarkable energy and vitality continuing almost unimpaired until the last few years. His youthfulness in old age was a never-failing subject of delight and astonishment to his friends. Of late, however, health and strength have rapidly declined, and he died practically of old age.

As an operating surgeon Mr. Crompton took a high position

at a time when the practice of surgery was very different from what it now is, anæsthetics were of course then unknown. Not many years ago, he was persuaded by Mr. Thomas Bryant, of Guy's Hospital, to place some of his many interesting surgical reminiscences on record, and this he did in a delightful paper published in the *Guy's Hospital Reports* for 1886-87. One of the most characteristic we shall venture to quote in full:—

“Some years ago I was called in the night to go to Meriden to an accident, prepared to amputate. I found a poor labourer lying on his cottage bed, his left arm hanging over the edge of the bed, dropping blood into a chamber pot. A tourniquet was tightly placed just below the shoulder-joint; the arm was black, as if already mortified. I heard that the man's arm had been caught in the cog-wheel of one of the agricultural machines, and was drawn in up to the shoulder. There was nothing for it but amputation above the injured part—in fact either close to the head of the humerus or by disarticulation of the whole. There was no room for a tourniquet, and I requested Mr. Clark, the surgeon of the village, to press upon the artery against the head of the bone.

“There was a boy in the room, an apprentice, I was told, but he declined to come near the patient to hold out the arm. I was therefore obliged to hold the artery against the head of the bone with my left hand, while Mr. Clark held the arm out at full length by the hand; but he told me he always ‘fainted at the sight of blood,’ so turning his face and body away as far as possible, he held on till I had made my incision and sawn through the bone as high as I could.

“There was only a cottage candle in the room, and therefore I asked Mr. Clark to hold it, so that I could look for the arteries, but he had had enough.

“The poor patient was sitting on a chair making no complaint; in fact I think there could not have been much pain felt, from the appearance of the parts, so he himself said, “Sir, if you will give me the candle, I think I can hold it;” this he did, bringing his right hand round with the candle in it, so that I had a good

view of the face of the stump. I was delighted to get my tired thumb and hand free, when I saw the orifice of the brachial and could pull it out by the tenaculum, and left it hanging till I could tie the artery, and so with the smaller vessels. After that I had no further difficulty, as only one or two small arteries seemed inclined to bleed.

"The man recovered, but I heard he died of phthisis six months afterwards."

In addition to his operative work, Mr. Crompton had, like all successful surgeons at that time, much general family practice, and it would be difficult to speak too strongly of the confidence and affection in which he was held in the many families where he was a friend as well as a medical adviser.

Apart from his work at the General Hospital, the most important service which he rendered to his profession was connected with the foundation of the Medical Institute. Largely influenced by his long-standing friendship for Dr. G. F. Evans, in commemoration of whom the Institute was started, he gave most generously to its funds, advocated its claims with conspicuous success amongst his wealthier friends, and served on its committee for several years—for two years as its President.

Of his personality it is more difficult to speak. Gifted as he was with quick perception, a keen love of nature, a kindly heart, and the happy habit of seeing the humorous side of things, his companionship even to his latest years was delightful to those who had the privilege of enjoying it; and although, as he was accustomed to say, hardly any of his own generation are left, there are many both in our profession and outside it who will miss his genial friendship, and will feel that his death has broken for them a strong link with the past.

PUBLISHERS' DEPARTMENT.

New Inventions, Drugs, etc.

Powder Insufflator. — Messrs. BURROUGHS & WELLCOME send us a new form of powder insufflator, which is a great improvement upon those instruments generally used for the purpose. There are several advantages gained in this invention. The pistol-shaped form of the instrument makes it extremely convenient to handle, and leaves the operator with one hand free for other purposes. The powder is placed in a cylinder which can be removed without difficulty and another substituted in its place. If a sufficient number of cylinders therefore be kept at hand, the powder to be used can be rapidly changed, and no intermixture of one with another can possibly occur. The insufflator is provided with both straight and curved delivery tubes, and a tongue-depressor can also be attached if desired. The price is not high, when the advantages gained are considered. The same firm also send us a notice of their *Strychnine Tabloids* for hypodermic use in cases of Snake Poisoning.

We have to notice several preparations sent us by Messrs. JOHN WYETH & BROTHER, who have recently established a local agency for their specialities through Messrs. F. H. Prosser and Co., 14, Ethel Street. Dr. Pissin's *Emulsified Calf Lymph* is prepared at his Institute which is especially devoted to that purpose, and is under the supervision of the Imperial Health Office of Berlin. It would appear that all possible precautions are taken to secure the absolute purity of the lymph; and this special preparation is believed to undergo no deterioration by keeping. Further, the tubes are hermetically sealed without the use of heat, which is claimed as, and we think is, an additional advantage. The *Sugar-coated Calcium Sulphide Tabloids* can be obtained of any strength from $\frac{1}{20}$ grain to 1 grain. This is an agreeable preparation of a not very pleasant remedy. The *Granular Soluble Pepsin* possesses no smell and scarcely any perceptible taste. We may also mention, amongst many preparations, *Blaud's Pills*, which, it is claimed, are more efficient hæmatinics than the same prescription as ordinarily prepared; the *Alkaline and Antiseptic Tabloids*, and the *Dialysed Iron Solution*.

New Books, etc., Received.

- The Medical Annual and Practitioner's Index, 1894. Bristol : John Wright and Co.
- Annual Report of the Birmingham General Hospital, 1893.
- A Manual of Therapeutics. By A. A. STEVENS, A.M., M.D., Lecturer on Terminology and Instructor in Physical Diagnosis in the University of Pennsylvania. Philadelphia : W. B. Saunders. 1894.
- A Text-book of the Diseases of Women. By HENRY J. GARRIGUES, A.M., M.D., Professor of Obstetrics in the New York Post-graduate Medical School and Hospital, etc. Philadelphia : W. B. Saunders. 1894.
- Bone Operations for the Correction of Club-foot, based upon an Analysis of 435 Operations by 108 Operators. By H. AUGUSTUS WILSON, M.D., Philadelphia.
- Sixteenth Annual Report of the Presbyterian Eye, Ear and Throat, Charity Hospital, Baltimore. 1893.
- On the Features which distinguish Epidemic Roseola from Measles and from Scarlet Fever. By CLEMENT DUKES, M.D., B.S. Lond., M.R.C.P. : Physician to Rugby School.
- Lunatic Asylums, their Organisation and Management. By CHARLES MERCIER, M.B., Late Senior Assistant Medical Officer at Leavesden Asylum, and at the City of London Asylum. London : Charles Griffin and Company, Limited. 1894.
- Eighth Annual Report of Holloway Sanatorium Registered Hospital for the Insane, for the year 1893.
- The Importance of Employing Anæsthesia in the Diagnosis of Intra-Pelvic Gynæcological Conditions. By HUNTER ROBB, M.D., Associate in Gynæcology, Johns Hopkins University.
- Importance to the Surgeon of a Bacteriological Training. By HUNTER ROBB, M.D.
- Maintenance of an Aseptic Technique in Gynæcological Operations outside of Hospitals. By HUNTER ROBB, M.D.
- A New Spigot Attachment to Facilitate Asepsis. By HUNTER ROBB, M.D.
- Statistical Report of In-patients treated at the General Hospital, Birmingham, for the year ending 31st December, 1893.

* * * Authors can have reprints of articles at the following rates :—

Not exceeding 8 pages	...	8/-	per 100
„ 16 „	...	12/6	„

The re-arranging of the type is the principal cost in the production of these reprints, so that smaller numbers will be the same price. Larger numbers at a proportionate reduction.

The Subscription (prepaid) to the *Birmingham Medical Review* is 6s. per annum, post free.

NOTICE.—*All Communications should be addressed to the Printers and Publishers, Messrs. Hall and English, 71, High Street, Birmingham.*

THE
BIRMINGHAM MEDICAL REVIEW.

JUNE, 1894.

ORIGINAL COMMUNICATIONS.

THE ANTISEPTIC TREATMENT OF
TUBERCULAR PHTHISIS.

BY ARTHUR FOXWELL, M.A., M.D. CANTAB, F.R.C.P.,
PHYSICIAN TO THE QUEEN'S HOSPITAL, BIRMINGHAM.

(Continued from page 284)

Hydrofluoric Acid is an antiseptic possessing great capabilities, but it is difficult to speak of it with any certainty, for I have discovered very little literature concerning it during the last six years, and most of what follows is drawn from a Report made by M. Hérard, its President, to the French Academy of Medicine in November, 1887.

As an antiseptic Hayem considers it on an equality with iodide of mercury. At the Manchester meeting of the British Association in 1887, Wm. Thompson stated that both it and Sodium fluosilicate were most potent antiseptics. Dujardin-Beaumetz and Chevy placed samples of water, urine, and various broths in glass vessels. To some of these samples they added hydrofluoric acid, making them solutions of 1 in 500, 1 in 1000, and 1 in 2000 respectively. After nine days none of the liquids so treated had undergone the slightest change, whereas all those liquids to which no acid had been added began to putrify on the second day.

Again, to putrid solutions (six days old) of meat and urine they added 1 in 1000 of this acid, and in two days they had all become perfectly sweet and clear.

H. Martin (Report to French Academy, Sept., 1887) inoculated six Pasteur flasks of veal bouillon with tubercle. Two of them were set aside as controls. The other four had 1 in 5000, 1 in 10000, 1 in 15000, and 1 in 20000 hydrofluoric acid added to them. All the flasks were kept in a temperature of 38° to 39° C. In 15 days both the control flasks contained a flocculent proliferation of bacilli, whilst in the other four the bacilli were all destroyed: a result which Martin states is superior to any he has obtained by any other antiseptic. But he noticed two curious circumstances: 1, If the solution were allowed to become neutral or alkaline the germs grew even faster than they did in the control flasks; and 2, if four days after the addition of the acid the bouillon was inoculated, the bacilli thus admitted were able to grow, though but slowly; this no doubt resulting from the action of the acid on the glass with the formation of an inert silicate.

Martin further inoculated guinea-pigs with tuberculous material. Those animals who were kept as controls all became tuberculous, dying in 20 to 40 days. Two other pigs were inoculated with a portion of the material to which 1 in 5000 of the acid had been added: one of these died in an hour of acute peritonitis and the other only lived a few hours longer. One in 10000 of the acid was added to the injection given to two others: these both died in six weeks of subacute, non-tuberculous peritonitis. To four others, injections were given containing 1 in 50000, 1 in 70000, 1 in 80000, and 1 in 100000 respectively: none of these had peritonitis, but they all died of tubercle.

Hérard inoculated guinea-pigs and rabbits with tubercle, some of these he kept as control subjects, and when killed these had *areæ* of acute congestion around the tubercles which had arisen, as indeed is usually the case. The others he placed in a box through which he passed a stream of air containing hydrofluoric acid vapour. On examining the bodies of these he found no *areæ* of acute congestion around the tubercles; moreover, many of these latter had undergone fibrous and cretaceous change. One of the rabbits which were inoculated had young ones, all of

whom died. After their birth the mother was placed in the box and submitted to the hydrofluoric treatment under which she greatly improved. She then again had young ones, and all these lived and were healthy.

Experiment therefore seems to shew that this acid possesses great bacillicide powers. Moreover, the active principle appears to be the fluorine. For Martin made use of a 1 in 100 solution of Ammonic fluoride. He inoculated three rabbits with tubercle and kept one as a control. The other two had $\frac{1}{6}$ of ammonium fluoride injected subcutaneously every day. The control animal died of tubercle in 15 days; one of the others died in 24 and the other in 27 from the effects of the ammonium fluoride, for in neither was any tubercle found.

In this connection it is interesting to note a statement of MM. Arthus and A. Huber in the *Archives Générales de Médecine*, 1893, vol. 1., p. 98. They say that a 1 in 100 solution of Fluoride of Sodium stops completely all fermentations due to germs—*e.g.*, the lactic, the ammoniacal fermentation of urine, the alcoholic, *etc.*; but that it has no action on chemical fermentations—*e.g.*, those of the digestive ferments. They have used this drug to diagnose between these two varieties of fermentation, and assert that the glycogenic function of the liver must be chemical in nature since fluoride of sodium has no effect upon it.

Bergeron's is, I think, the most practicable method of administering the gas. This method, which is described in the *Journal de Médecine de Paris*, February 1888, is briefly as follows. The patient is placed in a wooden chest of two cubic metres capacity. Into this chest the diluted gas is admitted through the roof at a uniform rate of two litres a minute. At the end of every fifteen minutes the patient steps out of the chest which is then thoroughly ventilated for five minutes. Each *séance* may occupy two, three, or even more such quarters of an hour. The diluted gas Bergeron obtains by passing fresh air through a leaden Woulff's bottle containing either the strong acid, or, preferably, a mixture of sulphuric acid and fluor spar. Both tubes of the

bottle are short so that neither dips into the solution ; the air therefore does not pass through this but simply takes up the gas contained in the upper part of the bottle. Commercial Hydrofluoric acid, if of good quality, for this contains a quantity varying from 27 to 54 per cent. of the pure acid, will do sufficiently well. A strong acid must be used to ensure a definite amount being taken up by the current of air, for Bergeron found that fresh air took up four milligrammes of pure acid per litre of air both when it was passed very slowly over the commercial acid and also when it was passed at double this rate ; but if a dilute acid were used the amount taken up varied considerably with a variation in the current-speed, and also in other ways.

Garcin's plan of inhalation is the pleasanter, for he passes the gas from his apparatus into the air of any ordinary room in which the patient may be, striving to maintain the proportion of 20 to 30 litres of gas-charged air for every cubic metre of capacity the room contains. He orders the patient to stay in this atmosphere for one hour daily. But this does not seem so effective a method as Bergeron's, for the hydrofluoric acid being a heavy vapour would not diffuse so equally through the atmosphere as if admitted through the ceiling into a small chamber. Yet Garcin obtained excellent results : of 100 cases 10 died, 14 remained in statu quo, 41 improved, and 35 were "cured ;" these cured cases having so remained without relapse for periods varying from 15 to 30 months subsequent to the omission of the treatment. But both the cured and improved cases belonged, nearly all of them, to the first or second stage of the disease.

Hérard in his report states that he found nothing disagreeable in the atmosphere thus produced by Garcin, that the inhalations were incontestably beneficial, that they were free from inconvenience, easy to use, and could be combined with all other kinds of treatment.

It is this last sentence which puts those who are sceptical amongst us at once on the alert and prompts the question, How much of the improvement noted was due to the combination of other kinds of treatment and, one may add, How much

to unaided nature? The attitude of mind which leads us to ask these questions is a most proper one if to it be added the finer attitude which bids us prove all things. But without the desire for proof the doubt becomes but a lazy scoff utterly unworthy the scientific mind of medicine.

Here at any rate we have the President of the French Academy of Medicine making these assertions as regards the beneficial action of hydrofluoric acid upon patients who have been examined and watched by himself:—

1. In a wonderful way, even perhaps after the first inhalation, the appetite returns and remains good.

2. Vomiting, if present, ceases with equal celerity.

3. Diarrhœa, though far more rarely and much less rapidly, is still sometimes improved.

4. Night sweats, as a rule, diminish at once and soon cease.

5. Pyrexia is soon modified, but takes long to go altogether.

6. Dyspepsia is markedly relieved after eight or ten *séances*.

7. Sleep and weight both greatly improve.

8. The cough becomes less stubborn, less constant, and less spasmodic; that occurring during the night being especially relieved.

9. In laryngeal cases the pain of speaking is lessened, but the voice is only slightly improved.

10. The expectoration lessens, becoming white, frothy, and mucoid.

11. The bacilli vanish. Schmidt examined 17 of Garcin's patients, and in 16, after repeated observations, failed to find any. Twelve months after the cessation of the treatment he had failed to find any for six months in these 16. At Hérard's request Charrin checked Schmidt's results and corroborated them in all points. Seiler only examined one of his patients for bacilli. In this case, after a month's treatment, these had notably diminished and he failed to detect any elastic fibres.

12. Finally, the local changes in the lungs, though naturally of much tardier development than the amelioration of symptoms, distinctly shew improvement and fibrosis.

The history of the introduction of hydrofluoric acid into medicine is an instructive one. Ever since 1820 the good effect the occupation of etching had upon workpeople with delicate chests had been recognised in the glass factories of Paris, and the glass cutters, who were peculiarly liable to phthisis, frequently asked to be allowed to take up etching instead of cutting. In 1862, Didierjean, a chemist in the large factory of Baccarat, made this fact known to a relative of his, the enthusiastic scientist, Dr. Bastien. Bastien prevailed upon Charcot and Bouchard to give the drug a trial: they did so for a couple of months but obtained no success from its use and dropped it after this too hasty trial with a negative expression of opinion. However Bastien himself took up its use with avidity and made it a regular part of his armamentarium. Some years later he recommended its use in a case of croup which he saw in consultation with Bergeron. Bergeron used it and was so satisfied with its action that from 1877 to 1884 it was his sole remedy in such cases. In this latter year he made a Report to the French Academy on the subject. Its use in phthisis was first brought to the notice of the Academy by Seiler in July 1885, who again still more forcibly urged its use in an address at Nancy in 1886. In 1885 Chevy, a pupil of Dujardin-Beaumetz, wrote an able report on its properties and its favourable action on a few phthysical patients. Then in September 1887, Garcin recorded the results of its use in 100 cases under his own care, expressing his belief that it stood in the very front rank of phthysical remedies.

Oil of Eucalyptus has long been a favourite remedy with me in phthisis. I was first drawn to it as a valuable drug from observing the excellent results it gave when used as a spray instead of carbolic acid in the dressing of empyemata, and especially from noting its sedative and healing properties when used as an emulsion in the dressing of chronic abscess cavities.

When physician to the Jaffray Hospital I used it persistently in cases of phthisis in doses of 2 to 5 minims dropped on sugar and taken three and four times a day. The results seemed to me superior to those obtained by treating similar cases under

the same circumstances with cod-liver oil, or oil and malt, or with the somewhat similar drugs, Terebine, Pumiline, and Pine Oil. Especially was its action good in soothing cough by easing expectoration and in removing any accompanying bronchitis. Generally, the local condition also improved though the patients were not hopeful ones, being usually in an advanced stage and recovering from some acute attack, either of hæmoptysis or pneumonia, for which they had been admitted to the General Hospital. But later knowledge has shewn me that such doses were not large enough to obtain all the possible good of which this drug is capable.

In February 1884 Professor Ball, of the Laennec Hospital at Geneva, on the suggestion of Dr. Roussel, began to treat his phthysical patients with subcutaneous injections of eucalyptol. He continued to do so for three years, and then made a report to the French Academy in which he stated that in his cases diarrhoea, cough, expectoration, night sweats, and fever, all improved, and that these improvements were followed by an increase in the general health and appetite. In one of his patients, after the treatment no bacilli could be found in the sputum though they were zealously sought for during three months.

Regarding this question of bacilli, Hainaut (*Journal de Médecine de Paris*, June 1888) states "that eucalyptol alone of all the methods we have tried prevents the multiplication of the bacilli." Roussel goes to the extreme of optimism, for he writes (*Union médicale*, 1887) "as to bacilli, after two or three months' treatment, the severest examination fails to find any trace of them. This exciting cause has completely vanished." On the other hand, Dujardin-Beaumetz says (*Acad. de Méd.*, Mar. 1887), "never have I seen the bacilli vanish under the influence of these injections. Eucalyptol modifies and lessens expectoration : it is a balsamic drug possessing the advantage of acting without causing gastric disturbance, but it is no specific against tuberculosis." Bouveret and Péchadre (*Lyon médical*, Feb. 1887), Biot (*Idem*, May 1887), Laplane (*Marseille médical*, 1887) and

Guiffart (*Union médicale*, June 1887), are, on the whole, in agreement with this declaration of Dujardin-Beaumetz. As I have indicated above, my own observations at the Jaffray Hospital, made contemporaneously, are quite in accord with those of these observers.

But Bouveret and Péchadre, whilst acknowledging the good action of eucalyptol on the catarrhal symptoms, assert that in febrile cases it is not only of no avail, but is positively harmful. Here, it seems to me, their *à priori* theory has biassed their clinical observation, for in my hands it has benefited both pyrexial and apyrexial catarrh, though it is manifest that catarrh, or any other morbid manifestation, occurring in the septicæmic body of a hectic phthisic must needs be less amenable to treatment than the same symptom arising where this septicæmia is absent or, if present, exists in so slight a form that it is unable to modify the general body temperature. However, having determined that the drug had no action on the bacilli or the poisons emanating from these, they also concluded that it could not lessen any evil symptom arising in a body which was constitutionally suffering from such infection.

Hainaut, on the contrary, asserts that the blood is so rapidly purified that pyrexia and night sweats vanish about the eighth injection. The two statements are not irreconcilable. If the hectic be due to an increasing deposit of tubercles eucalyptol is not likely to diminish it, but if it be due rather to the removal of caseous débris, a hectic in fact of ordinary suppuration, then eucalyptol will probably lessen it just as it lessens the hectic of an empyema.

But after all, is not this discussion as to the presence or absence of bacilli in the sputum somewhat vain and wide of the mark! I do not suppose any one of us has sufficient hardihood to declare a case of pulmonary tuberculosis cured so long as there be *any* expectoration, whether this do or do not contain bacilli. And if there be no sputum how can we examine for bacilli at all? It may be asserted that expectoration may persist from the lowered pulmonary tone, inferior tissue, and impaired

circulation, which are but the results of the ravages of a past tuberculosis. This may indeed be so, though as yet we have no sufficient clinical and pathological material to speak definitely concerning it. But even granting it, yet for all practical purposes we shall be assuredly well advised to treat such cases as only "improved" ones, for we must ever remember that tuberculosis confers no immunity as do the specific fevers; on the contrary, one attack renders the body far more susceptible if the local defences in the lungs have been permanently injured thereby, for the bacillary foe is ever present to act on the offensive.

And let me here impress upon you most strongly the fact that absence of expectoration is no evidence of absence of bacilli. Time after time have I been thus disappointed; for months all expectoration has been absent, both the general and local conditions have steadily improved and I have hoped that a permanent cure was in progress: then, at a next visit, one mouthful of sputum has been brought me, the patient may or may not complain of a slight cold, and I may or may not be able to detect a small patch of moisture; but whether or no, very seldom do I fail to find the fatal germ in the expectoration given me. But such disappointments should not induce in us despondency, rather a fresh outburst of energy; for is not the progress of syphilis, in the curability of which everyone believes, liable to the same unexpected and tantalising relapses!

There are several species of *Eucalyptus*. *Eucalyptus Globulus* has the best reputation. The peppermint gum tree, *E. Amygdalina*, is a stunted form which grows on poor sandy hills and dies on marshy soils. *E. Drumosa*, the mallee scrub, is a low bush which grows on the dry plains of Australia. *E. Oleosa*, or mountain ash, has also been employed in medicine. Dr. Benjafield, of Tasmania, says no aboriginal Tasmanian has ever been known to use anyone of these three for healing purposes, whereas, even when Tasman came to the island, he found the leaves of *E. Globulus* extensively chewed by the natives. Nor have these ever been planted in new districts (*e.g.*, California) as antimalarials. *E. Globulus* oil should be heavy (sp. gr. 0.9

about) and green : it should also be quite free from phellandrin and other terpenes. The other species are lighter, more spirituous, and more closely resemble turpentine. But of *E. Globulus* itself there appear to be several varieties as well as impure specimens of these varieties : so that at present one is more likely to get an impure or imperfect sample than one possessing the full medicinal value of the pure oil. The pure oil has about 41 per cent. of eucalyptol, which is usually considered to be the active principle, and it should not contain any constituents irritating to the mucous membrane of the bronchi. This latter quality places eucalyptus on a higher therapeutic level than pine oil, terebene, turpentine, etc., which irritate the bronchi by spasmodically contracting their vessels, as well as above guaiacol and the various phenols which cause bronchial hyperæmia by inducing vaso-motor dilatation.

Eucalyptus is generally admitted to be a powerful germicide : its action on full grown bacilli is from 3 to 5 times as strong as that of carbolic acid ; but its action on spores is only a weak one, probably considerably less than that of carbolic acid. The germicidal power does not reside in the eucalyptol alone, for Omelchenko has shewn that while the vapour of eucalyptol takes 134 hours to kill the bacilli of anthrax, 72 hours exposure to the vapour of *Eucal. Glob.* oil vapour is sufficient to destroy them. Indeed eucalyptol bears something the same relationship to eucalyptus oil that morrhuol does to *oleum morrhuæ*, and, antiseptis apart, we must at least lose most of the balsamic virtues of the oil by the use of eucalyptol. Benjafield quotes a letter to the *Tasmanian News*, wherein a gardener states that "if fruit trees be mulched in winter with eucalyptus leaves they will be entirely free from blight and fungi" during the ensuing summer. He also tells us that he injected a little of the oil into a rose tree covered with aphides, and that these all disappeared in a few days.

France, the land of hypodermic medication, gives a daily injection of some 4 minims dissolved in vaseline (12 minims)—Hainaut states that this medium both weakens the antiseptic

action and produces local irritation. So given, it is perceived in the breath at the commencement of the treatment in 15 to 20 minutes and the odour persists for a few hours only, but after a few days, in 3 or 4 minutes the patient smells it and continues to do so throughout the period during which the injections are administered. Inhalations have not this great drawback to such a degree, but in one of my patients the persistence of the odour after an hour's inhalation seriously impaired the appetite and almost necessitated omission of the drug. Except in disease affecting the larynx it is best to give the oil by the mouth in capsules of $\mathfrak{m}$ v. to $\mathfrak{m}$ x. each, the dose being gradually raised till $\mathfrak{m}$ xxx. are taken thrice a day. Exhibited in such a manner its prolonged use produces no ill effects, and can be relied on to greatly relieve the catarrhal element, at any rate, of tubercular phthisis.

Sulphur is a classical remedy for phthisis pulmonum, for Galen recommended his patients to live in huts near the crater of Vesuvius so that they might inhale the sulphurous acid fumes which were given off.

Sulphur mineral waters have long been of good repute in the treatment of phthisis. They are divided into the Soda Sulphurs, as those of Cauterets, Bagnères de Luchon, Amélie-les-Bains—Lime Sulphurs, as at Enghien and Schinznach—both Lime and Soda, as those of Eaux Bonnes and Harrogate—and the famous springs of Allevard, which are somewhat nearer the lime than the soda springs in constitution. Besides sulphuretted hydrogen, which is common to all, the soda springs contain nitrogen, and the lime carbonic acid. The action of all these waters is chiefly to stimulate the organism as a whole, and especially the pulmonary mucous membrane. They are not to be used in acute phthisis which they might only intensify, but in the chronic forms they produce a healthy stimulation which at first increases and afterwards dries up the expectoration. It is wise to begin drinking the water cautiously—not more than a quarter of a tumbler thrice daily—and afterwards to carefully increase the dose according to the effect brought about. Baths should also

be employed when possible, these acting much as a mild universally-applied mustard plaster might be supposed to.

The introduction of *sulphurous acid* into modern medicine as a remedy for phthisis bears a striking resemblance to that of hydrofluoric acid, for it was occasioned by the observation of the good effects that were produced upon phthysical employés in factories where fumes of this gas were constantly involved.

The *Lancet* reported in 1883 a statement of Kircher's that he had never heard of any phthisis amongst the employés of the factory of which he had been director for 40 years, and in which large quantities of sulphurous acid were produced. The managers of several other similar factories supported this statement.

In 1887 Dr. Auriol, an enthusiastic French physician, found several phthysical patients at work in an atmosphere made most irritating by the fumes of sulphurous acid. He wished to have them removed to other parts of the factory, but they begged to be allowed to remain expressing firm belief in the efficacy of the fumes for the alleviation of their disease. Thereupon Auriol at once submitted 70 phthisics to the following treatment. He placed the patient in a corner of a large closed room and lighted a little sulphur at the opposite corner. In the atmosphere thus produced he kept the patient till a moistened litmus paper began to redden. This was done twice daily. Thirty early cases were arrested and their sputum would no longer infect guinea pigs. Twenty obtained no benefit and 20 would not persevere.

Ley has shewn that many animals can well support an atmosphere containing 1:2000 sulphurous acid; but that 1:200 was toxic to most. Similarly a healthy man could with difficulty support a 1:6000 proportion; and he thinks the therapeutic dose should be from 1:10000 to 1:8000.

To obtain this dosage Dujardin Beaumetz proceeds as follows: let the room be thoroughly ventilated and filled with fresh air. Light a quantity of sulphur equal to 70 grains for every cubic yard of capacity. Do this in the evening, and closely seal up

the room. The next day let the patient live in this room from 7 till 11 and from 2 to 5. The reason for lighting the sulphur in the evening is to allow time for the gas to thoroughly diffuse and for the vapours to be condensed. This takes 10 to 12 hours. After the first three days, when the walls and furniture have become thoroughly soaked with the gas, 30 grains of sulphur will suffice.

This sulphurous acid treatment has been tried to a great extent in Paris, and apparently with much success and with no ill effects. Cough and expectoration are always lessened and sleep improved. The most striking instance I have read is a case recorded by Dr. Sollaud in 1887. A sergeant of marines at Cherbourg, age 26, after a severe chill had, in June 1885, a copious hæmoptysis. In October Sollaud found well-marked signs of phthisis. In February, 1886, he returned from a long sick leave considerably worse, with the signs and symptoms of extending cavitation. Under careful tonic treatment his general health much improved, but the local condition remained unchanged. Numerous bacilli were found in the sputum.

Wearying of hospital life, by much importunity he obtained leave to return to duty. At this time it happened that the barracks required thorough disinfection. Fortunately for him, to this sergeant fell the duty of opening the doors, windows, etc., of the sealed rooms in which the sulphur used for disinfection had been burnt. At first he bitterly complained of the irritation of the sulphurous acid, which produced great pulmonary oppression with much increase of expectoration and cough. But Sollaud persuaded him to persevere in his duty. Soon he found he could breathe without inconvenience in the densest fumes, and his condition began greatly to improve—"beyond all expectation" says Sollaud. Six weeks from the commencement of the disinfection the following note was made:—Cough and expectoration almost gone. Diarrhoea and hectic have vanished. There is no dyspnoea; the appetite is good, and he is daily gaining strength. The number of bacilli is much diminished. Slight signs of consolidation at either apex.

Four months later, *i.e.*, September 1886, there were absolutely

no signs of pulmonary disease—no bacilli had been found for a month, and he expressed himself as being thoroughly well ; and so continued up to the time of Sollaud's report to the Académie de Médecine in March 1887.

Sulphuretted Hydrogen Dr. Pilatte has found to be both the most powerful agent in preventing the development of the bacillus and also the most active destroyer of the fully developed germ. Hanging for one minute a piece of blotting paper soaked in a solution of tubercle in a current of this gas rendered the paper harmless.

Dr. Niepce, a physician at the Sulphurous Spa of Allevard, placed some tuberculous sputum in one of the drinking rooms for 20 minutes. He then found it had no effect upon guinea-pigs, though some of the same sputum, not so treated, produced tuberculosis in some other guinea-pigs in thirty days.

He also injected four mice with tuberculous matter. Two of these he kept for six weeks in the drinking hall, then killed them and found no evidence of tubercle in them ; the other two he kept in the open air, and they soon died, having their viscera filled with tubercles.

Lastly, he injected four rabbits with tuberculous material ; two he kept in the fresh air and they died tuberculous. To the other two he gave inhalations of pure sulphuretted hydrogen for 30 minutes thrice daily for three weeks ; and when, after a while, he killed them, he found them quite healthy.

This same indefatigable Dr. Niepce gave a patient with moderately early phthisis an inhalation of 3 per cent. of this gas for 15 minutes four times daily. He had previously proved that his sputum was actively tuberculous by inoculating a guinea pig with it, and also by finding numerous bacilli in it. During the treatment the bacilli steadily lessened, and after 27 days he tried in vain to inoculate another guinea pig.

Renzi stated in 1885 that he found inhalation of sulphuretted hydrogen as valuable as those of sulphurous acid, but others have not been so fortunate, and the gas has never been much employed in this fashion.

In 1857 Claude Bernard proved that sulphuretted hydrogen

injected into an animal's rectum was eliminated by the lung with great rapidity before it had time to reach the systemic arterial circulation, and that the gas thus given produced no disturbance in the animal's health.

To Bergeon of Lyons occurred the idea of utilising this fact in the treatment of tuberculosis. But he added carbonic acid to the sulphuretted hydrogen, as he found by experiment that the two gases could be injected together with impunity, and he hoped that the sedative action of carbonic acid would neutralise the unpleasant peristalsis and flatulence which sulphuretted hydrogen alone not seldom set up. Bergeon was very particular in insisting upon using a natural water as his solution of sulphuretted hydrogen; and Fraentzel declares that with an artificially prepared gas he has failed to obtain any benefit.

The Bergeon method is simple—carbonic acid is obtained from sulphuric acid and sodium bicarbonate—this gas then passes into a Woulffe's bottle containing a solution of sulphuretted hydrogen; from this bottle the mixed gases are injected into the rectum by a modified Higgensen's syringe.

The regulation dose, according to Bergeon, is 4 litres of the mixed gases, and 15 minutes to 20 minutes should be taken to inject them.

In most cases, in a few days, Bergeon found a marked lessening of cough, sputum, and dyspnoea. Sleep improved. A sense of well-being arose; and appetite, strength and weight increased. But in no case did the bacilli vanish. Many other experimenters have in the main agreed, but the treatment has never found favour in England, chiefly owing to the malodour of the gas, but partly to an Englishman's dislike to a frequent disturbance of his anal sphincter.

Dr. C. T. Williams tried it on five cases at the Brompton Hospital but was unable to get the patients to submit to the procedure with any persistency, and so abandoned his trial.

Mr. Bremner of Leicester carried out the treatment on three private patients in 1887 and 1888—Bergeon's cases were published in July, 1886. One of these I saw with him in consultation. There was chronic infiltrating tubercle at both

apices. The sputum was scanty, but in it Dr. Crooke found considerable numbers of bacilli. The patient, a spare, pallid, married man of 30, caught cold in May, 1887, and thereafter suffered from cough, streaked sputa, night sweats and emaciation.

The sulphuretted hydrogen treatment was commenced on October 15, 1887, and continued till December 24. Three pints of gas were administered every night and 30 minutes were occupied in the administration. He improved and the temperature became normal. Towards the end of January, 1888, he had a severe hæmoptysis (30 ozs.), and it was after this that I first saw him. He expressed great faith in the beneficial result of the treatment, and after a minute examination I failed to detect any mischief at the left apex; but the upper part of the right lung shewed signs of small scattered foci of consolidation, though in a dry state: the sputum still contained bacilli. This patient soon after went to Melbourne, taking a position in some Bank there, and I have just heard from Mr. Bremner that he is and has always remained healthy.

Of the two other of Mr. Bremner's cases one was a girl of 17, whose mother had died of phthisis. For six weeks four to five pints were injected night and morning. At the commencement she had an evening temperature of 103° , with much emaciation and abundant expectoration. Extensive and advanced disease in the left lung, with a left pleural effusion and early disease at the right apex. The temperature became normal, and she gained 6 lbs. in weight; while the cough and expectoration decreased. The improvement continued, and eight months later she had gained 9 lbs. more, was in a good general condition only complaining of a cough, while both sides of the chest had much flattened over contracted lung. But three years later she relapsed and died.

The third case was a schoolboy, 17 years old and six feet in height, who developed phthisis after typhoid. This patient also lost his pyrexia, gained weight, expectoration ceased and cough became slight. He went to Cambridge: is now a tutor in good health.

To be concluded.

ON SOME OF THE CLINICAL ASPECTS OF THE LATER STAGES OF GOUT, RHEUMATISM, AND RHEUMATOID ARTHRITIS.*

BY T. SYDNEY SHORT, M.D.,
VISITING PHYSICIAN TO THE INFIRMARY,
ASSISTANT PHYSICIAN TO THE GENERAL HOSPITAL, BIRMINGHAM.

Mr. President and Gentlemen,

During the last year I have had an unusual opportunity of seeing a large number of chronic affections of the joints in old people. One thing has struck me very forcibly; it is the difficulty that exists in many cases in deciding definitely to what the lesion is due that has produced the particular deformity.

Putting on one side for the present occasion the results produced by injury and the affections due to surgical causes, I propose to deal to-night with the clinical aspects of the three conditions known as gout, rheumatism, and rheumatoid arthritis. I have grouped these three together because whatever may be the pathological differentials, or what I may be permitted to call the pathognomics of the *post-mortem* table, there can be no doubt that clinically these conditions often look extremely alike, and if the real diagnosis can only be made at the autopsy it is clear that the value of the diagnosis is considerably diminished, at any rate from the patient's point of view. It is sometimes stated that these three conditions are totally separate and distinct, and that there should be no difficulty in deciding definitely under which heading a particular case should be placed, provided only that care be taken in examining the patient. This is no doubt true as regards our present divisions, but still, when two men make equally careful examinations, and each places the case under a category different from the other and is quite satisfied with his own decision, it naturally occurs to one's mind that they cannot both be right. In Charcot's book on senile diseases, there are two plates illustrating the deformities produced

* A paper read before the Midland Medical Society. March 7th, 1894.

by chronic rheumatism. The same plates are published by Garrod as typical examples of rheumatoid arthritis. I could mention cases which have lately come under my notice where the question has been not under which of two heads should a certain case be classed, but under which of three, and even then there was some doubt as to whether any one heading covered all the possibilities of the case.

I have seen this different selection happen so frequently that to the statement "they cannot all be right," I have been tempted to counter-query, why not? The mutual exclusiveness of the classes may only be a temporary arrangement. What I have to say to night tends in that direction.

DIAGNOSIS IN LATE STAGE.

When a case can be watched from beginning to end some accurate conclusion should be arrived at, but if only seen at the beginning, or perhaps unfortunately at the end, it is often an extremely difficult matter. As a doubtful early case, take the following:—A pale ill-nourished young woman, aged twenty-one, was confined during the first week of August, 1893; she was short of food for the rest of the year, and in the middle of December had pain and swelling in both knees brought on as she thought by cold. In about a week she had to lie up in bed and the swelling subsiding by the eighth day she got up, not however getting rid of the pain entirely. For two months after getting up she was free from pain in the knees, but had it almost continually in the hands and in one shoulder. When seen at the end of the time, *i.e.*, nine weeks from the commencement, both knees presented an appearance of slight thickening in the surrounding tissues. The carpo-metacarpal joints of both thumbs were swollen as were several of the first phalangeal joints, that is the large knuckles of each hand. The backs of the hands looked flat and somewhat wasted. The right shoulder was a little weak and creaked on movement. Although this case looks like a case of subacute rheumatism at first sight, it is very similar to the beginning of those changes in the joints which

eventually come under the head of rheumatoid arthritis. Is it possible then that such a case might become either a chronic rheumatism or a rheumatoid arthritis according to circumstances, or must it assume absolutely one form or the other unless the process stop? If it be destined to assume one form without the possibility of deviation, it is as certain in the early stages as in the later, if we could only predict it. This is really an important point, because if such a case might pass into one or the other according to circumstances, it would shew that the two diseases had a common origin.

Let us take another case at the other end of the scale, of a man who was sent to me the other day by Mr. Gaskin. His present condition was as follows:—He complained of pain and stiffness in the right shoulder, elbow, and wrist, and in nearly all the joints of the right hand. There was no obvious deformity, but the hand looked flattened and rather useless, and some of the first phalangeal joints were thickened, but not very markedly so. There was no cardiac affection, and the urine was normal in character. Here then was a case that looked just like a chronic or subacute rheumatism. The history put an altogether different appearance on the case. It was unquestionably that of gout, commencing seventeen years before in one big toe, and attacking his toes from time to time in the orthodox manner until other joints were affected. A few white specks in the lower eyelids were the only indications of uratic deposit to be found anywhere.

In looking at a case from the point of observation on which we stand to-night, that is retrospectively, the history then is very important, but at the same time I have found it very frequently unreliable. When a patient is absolutely crippled, and perhaps very old, the mental faculties are more or less dormant and in the bed-ridden wards of the Infirmary where such cases are seen in all their helplessness it is the exception to get any narrative which can be dignified by the name of history. The following are perhaps the most important points which for convenience will be applied to a case of chronic joint deformity which

appears to be rheumatic arthritis: we shall then see how they assist. A period of illhealth and malnutrition before the onset, the steadily progressive nature with intermissions of severity but no periodicity, the continually swollen condition of the joints with descriptions from the patient of hard bony outgrowths associated with sweating of the hands and feet all favour the supposition that the case is one of rheumatoid arthritis. Should however the onset appear to have been more acute the distinction is more difficult. In a decision against acute gout the length of the attacks, the absence of periodicity, the selection of large and small joints simultaneously and the less marked predilection for the great toe will all assist. From chronic gout by the absence of any description, usually volunteered, of chalk-stones and the history of bursal enlargements. From acute rheumatism, the comparative freedom from constitutional symptoms and heart complications, and the longer duration of the attacks may be noted as important points. From chronic rheumatism by the structural alteration in the joints which must have impeded movement if present. It will be noticed at once I think that all these points in the history are somewhat vague and shadowy with the exception of the actual changes in the joints noted by observation as well as by history. The history of chalkstones, when reliable, ought to settle the matter so far as gout is concerned but if, as Haig maintains, the uratic deposit may be completely absorbed before the later stage, even this point in evidence will have to be accepted with some reserve unless verified by independent testimony.

It is well known that acute gout and acute rheumatism are often mistaken for each other and there are some cases that appear to be rheumatism which only yield to anti-podagric treatment. In the summer of 1893 I saw a young woman with pain and swelling in both hands who had been dosed with salicylates for some weeks without the slightest improvement. The case certainly appeared to be rheumatism from every point of view, but on my changing the treatment and putting her on colchicum the effect was immediate and her improvement rapid from that

THE NATURAL MINERAL WATERS OF

State

VICHY

Springs.

CELESTINS.—For Diseases of the Kidneys, Gravel, Gout, Rheumatism, Diabetes, &c.

GRANDE-GRILLE.—For Diseases of the Liver, & Biliary Organs, &c.

HÔPITAL.—For Stomach Complaints.

HAUTERIVE.—An excellent TABLE WATER.

ALSO VICHY PASTILLES, SALTS, &c.



CARLSBAD

NATURAL

MINERAL WATERS

Are imported in Bottles and used in treatment of CHRONIC GASTRIC CATARRH, HYPERÆMIA of the LIVER, GALL STONES, CHRONIC CONSTIPATION, DIABETES, RENAL CALCULI, GOUT, and Diseases of the Spleen, arising from residence in the Tropics or malarious districts.

THE NATURAL

CARLSBAD SPRUDEL-SALT

Is Alkaline, and readily soluble in water. In small and frequent doses it is an efficient diuretic, but as an aperient it should be taken *before breakfast*, in doses of from 1 to 2 tea spoonfuls dissolved in water. To increase the aperient action of the Carlsbad Mineral Water, a teaspoonful of the Natural Salt dissolved in water should be added.

SOLE IMPORTERS:

INGRAM & ROYLE,

52, Farringdon Street, LONDON, E.C.

Samples and Pamphlet on Application.

TELEPHONE No. 4138.

TO THE MEDICAL PROFESSION.

WE ARE NOW PREPARED TO SUPPLY A FULL LINE OF
THE PHARMACEUTICAL PRODUCTS OF

MESSRS. JOHN WYETH & BROTHER,

Manufacturing Pharmaceutical Chemists,

PHILADELPHIA, U. S. ; AND 30, SNOW HILL, LONDON, E.C.

CONSISTING OF

COMPRESSED PILLS OR POWDERS.

These are supplied to the Retail Chemists in parcels not less than one hundred each, and it is intended that prescriptions for these goods should be filled in the ordinary way of dispensing, and not with original parcels, which enable the patient to repeat without prescription, as they would obtain a box of patent pills.

SOLUBLE COMPRESSED HYPODERMIC DISCS.

COMPRESSED OPHTHALMIC DISCS.

These would naturally be used under the guidance of the Physician or Surgeon.

WYETH'S BEEF JUICE.

WYETH'S DIALYSED IRON.

WYETH'S WINE OF TAR.

WYETH'S PEPTONIC PILLS.

WYETH'S PEPSIN, PANCREATIN, &c.

~~~~~  
*Having been appointed Distributing Agents for Birmingham and the Midlands for these preparations, we are prepared to supply Printed Matter and Catalogues on demand.*  
~~~~~

WHEN ORDERING THESE GOODS PLEASE SPECIFY "WYETH'S."

F. H. PROSSER & CO.,

COLONNADE BUILDINGS, 14, ETHEL STREET, NEW ST., BIRMINGHAM.

AGENTS FOR DR. PISSIN'S

(State Councilor of Health, Berlin.)

PURE CALF LYMPH.

FRESH SUPPLIES DAILY.

1/- per tube ; 6 tubes, 5/6 ; 12 tubes, 10/-

FRESH HEALTHY LEECHES—ALWAYS IN STOCK.

day. As a point of history it is difficult to say what label should be attached to the attack from which this girl suffered. It was christened rheumatism but I found that it answered to the name of gout. I do not want it to be thought for a moment that I consider a case gout or rheumatism according to the effect of treatment by colchicum or salicylates respectively, I do not. I mention this case to show that some gouty and rheumatic conditions cannot be distinguished. Since it is often difficult to give a name to the condition when we have it under actual notice, it must be much harder to come to a conclusion when we have only the patient's misty memory for details to rely upon.

To make a slight digression here, I should like to draw attention to a form of joint affection which seems to me to stand alone. There is a particular form of what is generally called rheumatism of the hands which occurs principally in young women. It is usually attributed to cold, such as the dipping of the hands into cold water during the winter, as in the occupation of a dairy-maid related by a case of this kind that I had the opportunity of watching for some time. Every joint, from the wrists to the finger tips, is stiff and painful; the fingers are straightened out and the hand is flat and board-like, with a tendency for the thumb to come on the same plane as the palm, as in the hand of the ape. The hands appear to be absolutely paralysed and the muscles rapidly waste. The pain is not great, at any rate not after the first few days, being more a sense of aching unless some movement be passively attempted. The slightest attempt at movement however causes the patient to squeal with acute pain. The case usually runs a protracted course and leaves the patient with pale, flabby, shiny, sweaty, stiff, and almost useless paws—for they can scarcely be called hands—which only recover after months of systematic massage. In several of such cases that I have seen the lesion has been referred to the nervous system and called peripheral neuritis, but the usual signs of neuritis are not present, such as the pain on pressure over the nerve trunks and soft parts, with formication or other sensory symptoms, while the acute onset and the

joint pains, both characteristic of the condition, point rather in an opposite direction. The nutrition of the hands, however, is certainly most seriously affected in these cases, and the profuse sweating points to profound vaso-motor disturbance. The actual cause of this type of joint inflammation, of which I have endeavoured briefly to give you a clinical picture, has not been discovered, but I cannot help thinking it is due to uric acid in some way.

To return to the history of the patient—unless a reliable conclusion can be arrived at in the matter of previous joint trouble the patient's account may hinder rather than help.

As an aid to diagnosis the treatment is of very little value in old-standing cases, as the marked articular deformity which I am considering in this paper is practically beyond medical relief. It may be said perhaps that there need be no difficulty about the diagnosis of gout any way, for the serum of the blood always contains an excess of uric acid and this can be easily demonstrated it is thought. I do not know how it may have been twenty years ago, but I find now that people very greatly object to being bled unless some immediate benefit is promised; and even then they are not satisfied unless it ensues. Many have a similar objection to blisters, but even if they take more kindly to this form of the abstraction of serum it is counter-balanced by the drawback that it does not seem so certain. In the later stages of gout however this test is not always reliable. I cannot give you a better example than Case 1 (the numbers refer to the drawings passed round) who has gout with tophi, deformities, and history all complete, and who occasionally suffers from attacks of unmistakeable gout now. The serum of the blood was examined in this man with all the precautions laid down by Garrod relating to proximity of joint attack, vicinity of uratic deposits, acetic acid, and so forth. The threads of huckaback remained absolutely free from any crystals of any kind. There are of course two very obvious suggestions to be made with regard to this failure which I intend to anticipate. One is, that the experiment was not done properly. I can only say in

answer, that I could not have done it more carefully a second time, as I did it in exactly the same way in which I have seen it done and done it before. The other suggestion is, that in quite the late stages of gout there is not sufficient uric acid in the blood. I have not been able to make sufficient observations on very late cases to offer any statement on this point at present.

The explanation that seems to me the most probable is that the case is gradually merging from gout into rheumatoid arthritis. The conditions of the hands, and the fact that there are some bony outgrowths on the inner side of the right knee, give countenance to this supposition. In such a case as this the difficulty is generally surmounted by saying that the patient is suffering from two entirely distinct conditions, gout and rheumatoid arthritis, an easy but not a satisfactory solution of the problem.

Again, with regard to the diagnosis of rheumatoid arthritis, it is stated that the presence of ulceration of the cartilages places the matter beyond doubt. It seems to me, however, that it is impossible in some cases to say whether this change has taken place. Are there any positive signs of this condition which can always be relied upon? Grating, if present, seems fairly conclusive, but when a joint cannot be made to move at all it cannot well be made to grate. The other distinctive sign of rheumatoid arthritis, viz., bony out-growths, is most valuable when present, but there are assuredly some cases where they cannot be detected for certain during life.

THE LATE DEFORMITIES.

The joint deformities that occur in the late stages of these diseases are perhaps most interesting from the fact that at times they simulate each other very closely. In all, however, the ultimate distortion and crippling may be something horrible to contemplate, as the photographs and sketches that I have brought down to-night will show. It will be convenient to take the deformities of rheumatoid arthritis first, and I may say that in describing the joints of the hands I am in the habit, for the

sake of brevity, of calling all the metacarpo-phalangeal joints "A" joints, the first phalangeal "B," and the second "C," adding the number of the finger thus, A₁, B₂, etc. The three thumb joints I designate "A," "B," "C," with the sign "+" as in music. This may be open to objection from a developmental point of view, but is convenient from a clinical.

Charcot divided the hand deformities of rheumatoid arthritis (which he called chronic progressive articular rheumatism) into two principal types. The first one on being viewed from the side assumes the form of the letter "M," and has for its chief characteristic the flexion of the A and C joints with hyperextension of the B joints. Cases 10, 11, and 18, are very fair examples of this condition.

The second type appears from the side like the letter "W," and depends on an opposite distortion of the above named joints, *i.e.*, the A and C are extended and the B are flexed. Case 16 shews this in a modified form. This does not appear to be so common as the other type.

There are several modifications of these types but they are somewhat complicated, and as it is not easy to say at times to what type a particular deformity should belong, it is comforting to know that the distinction is not of any vital importance.

The two full length photos shew the usual deformity of the feet. They are generally extended, stiff, and useless, with a tendency for the whole front part of the foot to turn inwards. In each of the cases shewn none of the joints of the ankle or foot had any movement. Sometimes the foot is rigid at right angles to the leg. The usual deformity of the knee is shewn in the sketch of case 2 (only badly drawn I am afraid). There is backward displacement of the tibia with prominence of the inner condyle, on the surface of which, in this case, there are large bony outgrowths. The patella rests on the outer condyle and the movement is almost nil. A few days ago I saw a case of only eleven weeks' duration which has almost the same deformity without any bony outgrowths. The attack commenced two months after a confinement, during which severe flooding took

place. She was weak and ill for the whole of these two months, and said she had some inflammation in the bowels. The very first day she was allowed up the knee became swollen and inflamed, and she has been unable to put it to the ground since.

In gout, the tissues around the joints and along the tendons are thickened in a typical case and of course tophi may be present. Case 3 was a good example of the typical hand of gout so aptly compared to a bunch of carrots. On looking, however, at Case 1, in which gout is unmistakably present, no such appearance exists, and here I think the condition is changing to one of rheumatoid arthritis. In Case 4, which is a case of gout, the thickening is indicated; but even here, there is a tendency to the hyper-extension so well-marked in the first type of the deformity of rheumatoid arthritis as described by Charcot. Bursal swelling in gouty cases is pretty frequently met with, and Case 5 shews the shape of the elbows in a case of old gout. Similar swelling may occur in rheumatism, but then urate soda is not deposited and the enlargement is simply fibrous. In this particular case of gout, I cannot feel any deposit of urate, so cannot say whether they are present or not, the nodules are hard but not gritty to the feel. I think the man would object to have them cut into out of mere curiosity, and I could not conscientiously argue the matter with him on any other basis.

In chronic rheumatism, the joint affection cannot always be differentiated from rheumatoid arthritis on its own merits unaided by constitutional signs, but I have brought down two sketches to shew what seems to me to be a shape often met with in rheumatism. The interosseal portion of the hand is flattened and often wasted, the carpal joints and the knuckles (or A joints) are swollen and the terminal phalanges may be deflected either to the radial or ulnar side with some thickening of the base of the last phalanx. When the deflection is towards the radial side, especially when two or three fingers assume the position together, the result recalls to the mind the claws of a crab. An ulnar deflection of all the fingers is also met with, and one sketch,

Case 6, illustrates that this deformity may occur in quite young people and after a first attack of rheumatism. The man whose hand is depicted had an attack of acute rheumatism when he was twenty years of age. It passed into a subacute stage and he seems to have been laid up for about nine months in all. The right hand was deflected after the attack, and he thinks it got worse during the first year that he was about again, but has remained practically in this condition ever since he was twenty-one, and he is now thirty. With the exception of slight rheumatic pains he has not suffered since. In this case, the fingers can be replaced by passive movement, but he cannot maintain them in the original position. This hand may be compared with ulnar deflection in rheumatoid arthritis.

The small nodular enlargements which occur at the last joint of the fingers in the later stages of rheumatoid conditions are interesting from the difficulty experienced in putting them into their right pigeon holes. Heberden thought they were not gouty, Begbie said they were, Garrod considers them most certainly as a manifestation of rheumatoid arthritis, and Charcot places them under his division of progressive articular rheumatism, which he thinks is the proper name for the condition that Garrod describes as rheumatoid arthritis. The enlargements are known by various names, nodular rheumatism, *digitorum nodi*, and Heberden's nodules being perhaps the most familiar. This deformity occurs at the second (C) joint of the phalanges and is really an enlargement of the distal bony end of the last phalanx and may be associated with thickening around the joint and ankylosis. There is no doubt that although this condition occurs very frequently in rheumatoid arthritis it is also met with in other conditions. I have a case at the present time under observation where there is one of these nodes on the finger, and the only other symptom is an occasional pain in one hip of a neuralgic type, distinctly connected with weather changes and not affected by movement as a rule. If this is going to be a case of rheumatoid arthritis the symptoms will have to hurry up as the patient is several years on the wrong side of sixty now.

These nodules can be seen in several of the cases, whose hands I have photographed or drawn.

CONSTITUTIONAL SYMPTOMS.

In the later stages of gout the constitutional symptoms are generally supposed to be well marked and a formidable list is given, but I have found that only a few are sufficiently constant to be ranked as characteristic, and even these are found at times in cases which appear to be more rheumatic than gouty. The high tension pulse with thickening of the wall of the heart, associated with low spirits, and mental depression breaking out at times into fits of irritability will be frequently noticed. I do not think however that the irritability of temper in the late stage is so well marked as it is in the middle period of gout. I need only refer to the gouty contracted kidney since detailed description of this will be out of place here. Uræmic symptoms due to this renal condition may be, and often are, the cause of death in old gouty people, and at times such manifestations of uræmia simulate very closely the effects of hæmorrhage into the substance of the brain. Cases of this kind are all the more puzzling because the symptoms which so closely resemble apoplexy may be actually anticipated on account of the high tension pulse and perhaps accompanying disease of the arterial walls. The following case was probably of this nature: J. M., æt. 60 years, had right hemiplegia with aphasia in 1890, following an attack which at the time was considered to be cerebral hæmorrhage. From time to time after this, at intervals of several months, he had right sided convulsions until May 1893, that is three years subsequent to the initial lesion, when he had a severe fit which was followed by increase in his aphasia. For the next six months the fits continued about every two months, with sickness and high tension pulse. He was then passing a urine of low specific gravity with an occasional trace of albumen and it was thought that the convulsions were uræmic in nature following, but not necessarily connected with, the original hæmorrhage. When however he died on Nov. 9th of the same year an autopsy was

made and no trace of any hæmorrhage could be found at all. He had well marked granular kidneys and I am inclined to think that this was the real cause of all his symptoms. I have another case under my care now who has had what appeared to be cerebral hæmorrhage, followed by aphasia with intermittent attacks of fits during the last eighteen months and I should not be surprised to find that these are also due to uræmia.

Extreme muscular weakness has been a marked feature in most of the cases that I have had under observation, but as they generally suffered from severe crippling of the limbs it is not very easy to say how much of this may have been due simply to disuse. Neuralgias and kindred pains are often seen. What is commonly called muscular rheumatism or myalgia, a condition whose pathology appears to me to want working up, has occurred just as frequently, so far as my observations go, in gouty cases as in rheumatic cases, and this condition ought to prove a strong connecting link between the two diseases. The cases of muscular rheumatism which seem the most instructive are those which are followed by a neuralgia of a neighbouring nerve. A lumbago followed for example by a sciatica. I have the notes of a case in which a pain in the loins, having all the appearance of lumbago at the time, with pain and stiffness on movement, was followed by neuralgia in the side blossoming into a fine crop of herpes zoster. I believe that Gowers is of the opinion that the nerve lesion is due to direct spread of inflammation from the muscle to the nerve.

The eye troubles that I have noted personally in the late stages of gout have, up to the present, been of one kind only, and that has assumed the form of an acute conjunctivitis with much suffusion, some swelling of the lids, running of moisture, and a distressing feeling of irritation and great heat, very much the symptoms in fact that follow the prolonged sojourn of a foreign body beneath the upper lid, with perhaps a greater feeling of heat to the patient. This is the gouty "hot eye." It occurred to me at first that this condition might be due to the direct irritation arising from the presence in the lids of small

CHICAGO,
1893.

Highest Award.

MEDAL
AND
DIPLOMA.

“Virol.”

POSITIVE
SUBSTITUTE
for

COD LIVER OIL.

FORMULA.

“Virol” simply consists of beef marrow fat from marrow bones which are sawn in sections and the marrow scooped out. The marrow, when separated, is dissolved at a very low temperature, and afterwards combined with raw eggs, the shells of which are also brought into the preparation by the aid of lemon juice. To this is added the carbohydrate in the form of malt extract. So that the fats (marrow and eggs), the proteids (egg albumin), and carbohy-
drate (extract of malt) are arranged in proportions carefully calculated on modern physiological and dietetic data. That the emulsion is a very perfect one is shown by the appended microphotographs, all under power 250.

British Medical Journal, Jan. 13th, 1894.

ANALYSIS.

(CAFFYN'S MALTO-CARNIS.)

“The title sufficiently describes this preparation, and our examination confirms the description.

FORMULA.

R	Liquor Carnis (Caffyn)	... 65 parts
	Cocoa Essence (Cadbury)	... 10 ”
	Ext. Malt	... 24 ”
	Misce. sec. art.	

ANALYSIS by “The Lancet” Chemists:

“Analysis showed—mineral matter, 3.30 per cent. (rich in soluble phosphates); total solid matter, dried at 100° C., 60.28 per cent. Nutrients and stimulating elements like these are rarely found combined in so satisfactory a manner.” *The Lancet*,

Samples supplied by the

LIQUOR CARNIS CO., LTD., ASTON CLINTON, BUCKS.

NESTLÉ'S FOOD

FOR

INFANTS & INVALIDS.

"Invaluable in Cholera Infantum."

"Beneficial as a Diet in severe cases of Typhoid."

"Renders valuable assistance in Wasting Fever."

PAMPHLET containing Extracts from Standard

Medical Works in which the above

Testimony is given, sent free with

Sample Tin on application to

H. NESTLÉ,

9, Snow Hill,

LONDON,

E.C.

HIGHEST HONOURS at the CHICAGO EXHIBITION,
THE MEDAL and DIPLOMA have been
awarded both to NESTLÉ'S FOOD and NESTLÉ'S MILK.



ATTENTION

is also drawn to

NESTLÉ'S
SWISS (CONDENSED) **MILK.**

Which through its RICHNESS in CREAM and UNIFORMITY of QUALITY has obtained the LARGEST SALE IN GREAT BRITAIN.

It can be used for all purposes of FRESH MILK.

Samples to members of the Medical Profession sent free on application to

H. NESTLÉ, 9, SNOW HILL, LONDON, E.C.

tophi, but this cannot be the cause in all cases as I have several under notice at the present time who possess such tophi, but who have had no attack of hot eye at any time. Inflammation of the sclerotic with deposits of urate of soda have been described, but none of my advanced cases have shewn this. In one, I thought some isolated white specks on the surface of the sclerotic were minute tophi, but on careful examination they turned out to be fat, similar to the yellow deposit so frequently seen just to the outer side of the cornea. Amongst the occasional accompaniments of the later stages of gout I may mention skin affections, bronchitic irritability and diabetes. I should be inclined to place gastritis as a late symptom as regards the patient, but not as regards the disease; in other words, that when gastric symptoms are severe the patient less frequently reaches old age. For some time I have been on the look out for evidences of the connection between gout and epilepsy which is held to exist. At the present time I have 125 cases under daily observation and a considerable number more that I see from time to time. Up to the present I have seen very little of the connection, and what has come under my notice is not free from the suspicion of pure coincidence. Fits occurring in the later stages of gout I should be tempted to put down to uræmia. But at the same time I found that in altering the diets of a large number of epileptics an increase in the number of fits appeared to follow an addition of meat food, and when this was replaced by less nitrogenous food the fits were less numerous. I shall hope to take up this matter more fully at a future meeting of this society. After reading Haig's observations on uric acid, it has been suggested to me that perhaps uræmic fits and epileptic fits are more closely allied than we think. So that when I refer to fits occurring for the first time in advanced gouty subjects as uræmic, I use the term in deference to our present phraseology.

Since Dr. Wade published his essay on "Gout as a Peripheral Neurosis," my attention has been drawn to numerous cases where symptoms due to disturbed innervation have occurred in gouty and rheumatic subjects.

In one case, a woman *æt.* 40, who has suffered from recurrent blotches with much infiltration every winter for five years, severe periodical headaches occur which present all the characteristics of uric acid headaches. She herself has noticed an inverse relation between the appearance of the blotches and the occurrence of headaches. Before both she has a distinct period of wellbeing. If she takes meat she invariably suffers from headache or blotches.

Another case, *æt.* 50, suffered from recurrent erythematous lumps along both arms and fore-arms, the left arm being most affected. Towards the end of this time she had severe pains in the elbows and down the arms. The ulnar nerves, the right especially, were distinctly tender to the touch when I first saw her. She has signs of a gouty kidney. It is interesting to note that in one arm the poison affected the sensory fibres most and in the other the nutritional.

A very marked history of what was said to be rheumatic fever is present in a man *æt.* 50, whom I have now under treatment. He suffered for about six months with pins and needles in the hands and arms. He could not continue at work on account of severe pain shooting up the arms whenever he grasped a hard object. During the same period he has had acute erythema from time to time.

These three cases, selected out of those whose notes I have, shew very well the connection between the gouty and rheumatic erythemas and symptoms which are perhaps more certainly of nervous origin.

The constitutional symptoms in chronic rheumatism need not occupy much time. The important visceral lesion in the earlier stages, the endo- and peri-carditis, may of course leave cardiac complications, which remain to the end, but in cases which pass through all the phases of the disorder and reach the infirm stage, it is unusual to find valvular disease unless the resulting compensation has been very efficient. The other lesions are briefly, pleurisies, cramps, myalgias, and neuralgias, and skin affections.

Iritis seems only occasionally to be met with in advanced rheu-

matics. If deafness be met with it is frequently put down to rheumatic arthritis of the joints of the ossicles, but how this can be demonstrated I can scarcely comprehend. I cannot say that I have noticed that old people with rheumatism are more deaf than others.

Passing on to rheumatoid arthritis, the principal constitutional symptoms in this disease have been ably summarised in Dr. Spender's book on Osteo-arthritis, and attention was drawn to them in a paper read by Dr. Griffiths in this room last year. I have been making some observations lately as to whether any of them persist in the later stages, and if so, which. It seems doubtful whether the first of his cardinal symptoms, the increased rate of the pulse is kept up in the late stages. I had the pulse counted in a good many cases, and a few selected ones will serve as samples. The observations were made on consecutive days, varying from a fortnight to three weeks in duration, and the averages were struck as follows:—85, 71, 82, 76, 80, 80, 83. For people advanced in age and getting little muscular movement, these figures shew a slight increase, but it is only slight. These pulse rates bear no comparison as a question of importance with the high rates, such as 140 met with in the earlier periods. It is only fair to say that two of the number, viz., the last two belonged to cases that might be termed chronic rheumatism by some observers who draw very fine lines of distinction. The second of the cardinal symptoms, the pigment spots and moles, certainly persist to some extent, but whether this includes all the spots that the patient has ever had I cannot exactly say. Many of the freckles which are considered so characteristic can be seen on the bodies of old rheumatoid arthritis cases if they be carefully sought. The vaso-motor disturbances, which constitute the third symptom, persist principally in the sweating of the hands and feet. The local congestion or erythemas, however, have appeared to me to be more common in cases that should be called purely rheumatic if any distinction be made at all. The neural symptoms included under the fourth head cannot be very satisfactorily made out in many cases; the

neuralgic pains and cramps are certainly met with, but the great pain these people suffer on any pressure or manipulation, makes it impossible to detect localised nerve pain with any degree of accuracy. The pains in the muscles of the ball of the thumb and in the ulnar nerve area do not persist I think.

In conclusion then, this paper, which is the outcome of personal observations of a considerable number of cases and the notes that I have made of them with the help of Drs. Selby and Hogg, my house physicians at the Infirmary, may be briefly summarised in these words—that whether looked at through their histories, joint troubles, or constitutional symptoms, the late stages of gout, rheumatism, and rheumatoid arthritis present clinically a relationship so close that a common original cause is suggested.

I think a few words are due to you in apology for the extreme roughness of the pencil sketches on the specimen cards. I started with the intention of photographing all the cases in illustration of my paper, but I found that the immobility of so many of the limbs made it an impossibility to get any view that would shew them in a position otherwise than from the front. In this way many of the points that I wished to bring before you would have been lost. The light and surrounding conditions often made a satisfactory picture impossible by means of a camera, so that I was driven to some other method. Although I am quite aware the outlines are little more than diagrams I think they serve to fulfil the object required of them ; and I trust they have helped to render a somewhat monotonous paper on a subject that is generally considered dull, and could never be called exciting, a little less tedious than it would otherwise have been to my audience.

PAINFUL MENSTRUATION.*

BY CHRISTOPHER MARTIN, M.B. EDIN., F.R.C.S. ENG.,

SURGEON TO THE BIRMINGHAM AND MIDLAND HOSPITAL FOR WOMEN.

THE process of menstruation is nearly always—in this country at any rate—associated with some degree of pain or discomfort. In most cases however this is quite bearable, and does not amount to more than a feeling of malaise, with backache and a sense of fulness in the pelvis. Between such mild cases and those where the women suffer absolute agony, there are infinite gradations. We cannot measure pain. Hence in some of the milder cases it is difficult to say if the suffering the patient complains of be really in excess of what is usual in healthy women; whether in fact it amounts to actual dysmenorrhœa.

One of my Edinburgh teachers used to lay down that it was dysmenorrhœa if it was severe enough to interfere with a poor woman doing her work during the period, or to prevent a rich woman from going to a dinner, a dance, or a tennis party. It is a symptom of many pelvic diseases, but it is not a disease in itself. When possible we should always endeavour to discover and treat the cause. In many cases however a careful examination fails to reveal any causative lesion, and here we are compelled to treat the symptom only.

CLASSIFICATION.

Much confusion has arisen from the perplexing system of classification adopted by most authors. Thus there have been described as distinct varieties of dysmenorrhœa—the congestive, obstructive, inflammatory, spasmodic, neuralgic, membranous, gouty, rheumatic, ovarian, and tubal forms. The disadvantage of such cross-classification is obvious.

It is, I think, more convenient to divide the cases roughly into two groups:—

* A Paper read before the Midland Medical Society on April 4th, 1894.

1. Uterine dysmenorrhœa—where the fault lies in the uterus itself.
2. Extra-uterine dysmenorrhœa—where the fault lies outside the uterus, for example, in the uterine appendages.

It may be noted that as a general rule the pain in the extra-uterine cases is distinctly premenstrual, often beginning a week before the period and ceasing at its onset. In the uterine cases the pain usually occurs during the period.

Among the lesions giving rise to uterine dysmenorrhœa may be mentioned—Imperfect development of the uterus (infantile uterus, and stenosis of the cervix); chronic metritis; chronic endometritis (one form of which, “membranous endometritis,” causes the so-called “membranous dysmenorrhœa”); small interstitial myomata; and certain displacements of the uterus.

In some cases no gross lesion can be made out; but it will generally be found that the endometrium is hyperæsthetic and that the patient complains of great pain as the sound passes the internal os.

In extra-uterine dysmenorrhœa we generally find evidence of disease outside the uterus, and in the great majority of cases in the uterine appendages. The ovaries may be in a state of acute, subacute, or chronic inflammation; they may be the seat of cystic degeneration or sclerosis; or they may be bound down by adhesions.

The Fallopian tubes may be similarly diseased. We may find acute or chronic salpingitis, hydrosalpinx, pyosalpinx, hæmatosalpinx, or simply densely adherent and occluded tubes.

Chronic pelvic peritonitis in the form of adhesions matting the organs together is a fruitful cause of painful menstruation.

THE CAUSE OF THE PAIN.

Let us now briefly consider the pain of dysmenorrhœa and the mechanism of its production. We may distinguish three factors—(1) congestion, (2) spasm, (3) neuralgia.

1. *Congestion.*—If the blood pressure in an inflamed, hyperæsthetic, and resistant tissue be increased, pain is produced.

Hart and Barbour ascribe the dysmenorrhœa of metritis to "the flushing of a diseased tissue with blood." The general surgeon is familiar with the fact that a very slight increase of the blood supply to a chronic abscess of the tibia makes all the difference between misery and comfort. An inflamed tissue is very sensitive to alterations of tension; an attempt to stretch it causes agony, as is shewn in the condition of painful chordee.

Now in chronic inflammatory disease of the uterus the walls of the uterus become thickened, hard, and inelastic. When the menstrual engorgement takes place they cannot swell up and accommodate the extra quantity of blood, and increased tissue tension results. This tension is interpreted by the hypersensitive nerves of the uterus—often themselves chronically inflamed—into pain.

There is reason to believe that the ovaries and tubes become engorged with blood before the onset of menstruation. If they be in an inflamed condition and bound down by adhesions their tissues cannot expand to accommodate the increased blood supply, and tension and pain result. The pain is premenstrual because the engorgement is premenstrual.

2 *Spasm*.—The uterus is a mass of nonstriped muscular fibres woven around a core of mucous membrane. These fibres are always in a state of rhythmical activity, alternately contracting and relaxing. These rhythmical contractions are very evident in the pregnant uterus—they constitute one of the most reliable signs of pregnancy—and they are still more obvious in the "pains" of labour.

Similar but much feebler waves of contraction pass over the non-pregnant uterus. During menstruation they become more marked. Under certain morbid conditions these contractions become spasms and extremely painful. Spasmodic dysmenorrhœa is in reality colic of the uterus. It is frequently associated with hyperæsthesia of the endometrium, particularly of the region of the internal os, and it is apt to be excited by the presence in the cavity of the uterus of foreign bodies, such as pieces of exfoliated mucous membrane or even blood clots. In this it reminds one

of the post partum "after pains" due to retained clots or fragments of placenta.

In some of the cases of extra-uterine dysmenorrhœa it is highly probable that the colicky pains which precede each period are due to spasmodic contractions of the muscular coats of the Fallopian tubes. These may be so severe as to cause the patient to roll about the bed in agony.

3. *Neuralgia*.—Both the uterus and the ovary are subject to neuralgia. It is apt to occur in anæmic and neurotic women, being one of the manifestations of neurasthenia. In some cases it seems to be due to gout and rheumatism. There may be a hyperæsthetic condition of the uterus, but usually it is otherwise normal. In some cases of ovaralgia the ovaries may be felt enlarged, prolapsed and tender, but they are rarely grossly diseased.

The pain is burning, shooting, and lancinating, and is characterised by its wide distribution. It is felt not only in the pelvis and back, but in the breast, in the groin and down the thigh.

TREATMENT.

In all cases of dysmenorrhœa attention must first be directed to the general health. If the patient be anæmic, Iron—either in the form of Blaud's pills, or in combination with a saline purgative—must be given. It is indicated in cases where there is scanty menstruation and is of much service in promoting the development of the infantile uterus.

If the patient be gouty or rheumatic these dyscrasias require suitable treatment. Guaiacum will be found of service in the so-called rheumatic dysmenorrhœa.

The bowels must be kept freely open by the use of mineral waters. A vigorous saline purge should be given just before each period.

Unless there be evidence of marked inflammatory mischief in the pelvis the patient should be encouraged to take plenty of active exercise in the open air during the intermenstrual interval. But during the actual period she must rest, and in severe cases

in bed. The recumbent posture lessens the pressure in the pelvic veins and will do much to relieve the pelvic congestion. If necessary the foot of the bed may be raised to elevate the pelvis and promote the flow of blood out of it. Heat applied in various ways often gives wonderful relief. The use of a hot mustard foot bath seems to act by lessening the blood pressure in the pelvis. In some cases a hot mustard poultice applied to the abdomen acts like a charm. Dry heat is conveniently applied to the abdomen by means of Leiter's metallic coils.

Hot vaginal douches are of great service. They should be given night and morning during the intermenstrual interval, the water being as hot as the patient can bear. As a rule patients prefer to discontinue them during the period; but I have never seen them do harm then, and they often give marked relief.

In the dysmenorrhœa due to inflammatory conditions of the uterus or the appendages, in addition to the regular use of hot vaginal douches, a glycerine plug may be inserted into the vagina twice or thrice a week. It causes a free watery discharge and helps to deplete the pelvis. The patient must rest and keep the bowels open with saline purgatives.

THE USE OF ANODYNES.

But what medicines can we give to directly relieve the patient's sufferings? There are two remedies that must *not* be given, alcohol and opium—and this in spite of the fact that we know of nothing that will relieve the pain so promptly and so well. A stiff glass of hot gin-and-water given at the commencement of the period seldom fails to bring ease and comfort, and will frequently tide the patient over the agony of onset. Could we only be sure that the single tumbler of toddy—once a month—would never be exceeded, the remedy would be an excellent one. But I am not exaggerating when I assert that much of the secret drinking that prevails amongst women may be traced to the pernicious practice of plying them with alcohol during their periods.

So also with morphia: it gives almost immediate relief to the

patient's sufferings. But the danger of teaching the patient the morphia habit is so great that only in exceptional circumstances are we justified in prescribing the drug. Dysmenorrhœa is a lesser evil than the morphia-mania.

What drugs then may we prescribe with safety and success?

Viburnum Prunifolium is a perfectly safe and reliable anti-spasmodic. It has a distinctly sedative influence on the uterus and appendages. The liquid extract may be given in doses of from ten to thirty minims three or four times a day, both during the periods and the intervals.

Viburnum Opulus is also an excellent remedy in dysmenorrhœa and is the chief active ingredient in "Hayden's Viburnum Compound." This is a pleasant but rather expensive preparation. It should be given in acute uterine colic in drachm doses in a wineglassful of hot sweetened water every hour or half-hour until relief is obtained.

Belladonna is a useful anodyne. It may be given in full doses in combination with Bromide of Potash.

Indian Hemp though less reliable is occasionally very efficacious. It may be given in the form of rectal suppositories (each containing one grain of Ext. Cannabis Indicæ and one grain of Ext. Belladonnæ). One of these suppositories should be inserted every evening during the week preceding the period, and one night and morning during the period.

Antipyrin combined with Sal Volatile is often of great value in neuralgic dysmenorrhœa.

Amongst other drugs commended by different authorities I may mention Chloral, Castoreum, and Nitrite of Amyl. Of these I have had no personal experience and can therefore neither praise nor condemn.

SURGICAL TREATMENT.

1. *Dilatation*.—In cases of severe dysmenorrhœa of uterine origin, unrelieved by the measures already described, dilatation of the cervix is often of great value. The best results are obtained in the purely spasmodic cases, particularly where spasm

is excited by the passage of a bougie through the internal os. It is indicated in some cases of imperfect development of the uterus especially where the cervix is infantile. It is also very useful in cases due to endometritis. It is contra-indicated if the uterus be fixed by adhesions; and it is a highly dangerous proceeding if there be inflammatory disease of the uterine appendages.

The best time for its performance is midway between two periods. Just before the operation the vagina should be thoroughly irrigated with some reliable antiseptic. The patient must then be anæsthetised and placed in the lithotomy position. The anterior lip of the cervix is then seized with a pair of vulsellum forceps and drawn down towards the vulva. The cervix canal is then dilated with Hegar's dilators (or some modification of these) up to No. 9 or No. 10. This must be done slowly and undue force avoided. It will probably take half an hour. If there be endometritis the interior of the uterus should be curetted and swabbed with Iodised Phenol. The cavity of the uterus should then be packed with Iodoform gauze. This should be removed in from twenty-four to forty-eight hours, and thereafter the vagina irrigated night and morning with Iodine water. The patient should keep her bed for a week or ten days after the operation.

Frequently a single dilatation effects an immediate, complete, and permanent cure. In some cases only temporary relief follows; and in the course of a few months the old pain begins to return. Here it is often advisable to repeat the dilatation. In other cases it does no good whatsoever.

2. *Operations on the uterine appendages.*—There are many cases of obstinate dysmenorrhœa due to non-suppurative lesions of the appendages. Some of these cases we may reasonably expect to be relieved by suitable "conservative operations" short of removal of the organs. I am confident that there is a brilliant future for conservative pelvic surgery. It will certainly be a great triumph if by its means we are able to permanently relieve the patient's sufferings, restore the diseased organs to health, and save her from the mutilation of castration.

For cases otherwise incurable this operation (removal of the appendages) remains as the *dernier ressort*. It is a proceeding that must never be undertaken lightly, nor without frankly explaining to the patient and her husband the immediate and remote results. It is not equally efficacious in all cases of dysmenorrhœa. It is of most service and affords the most striking relief in cases due to gross disease of the ovaries and tubes. As a general rule, the less there is the matter with the appendages the less likely is their removal to benefit the patient. For instance, the complete removal of both ovaries and tubes rarely fails to permanently and completely relieve the sufferings due to a bad double pyosalpinx. But it is often of little or no use in those cases which are doubtfully labelled "chronic ovaritis." It certainly, in such cases, arrests the menstrual flow; but too often it fails to relieve, and may even aggravate, the chronic pelvic pain, the backache, the groinache, and the nervous depression from which the patient suffers. So also it is frequently a disappointing remedy for the condition known as "infantile uterus;" menstruation ceases, but the patient continues to suffer pain. To remove healthy ovaries and tubes to cure a dysmenorrhœa for which there is no causative lesion is as unscientific as the wholesale extraction of healthy teeth to remedy a facial neuralgia. It is absolutely unjustifiable unless the patient's sufferings be very severe and all other remedies have failed.

THE INFLUENCE OF MARRIAGE.

It is an undoubted fact that many cases of uterine dysmenorrhœa are cured by marriage. The imperfectly developed uterus is aroused by it into increased nutritive activity, and its circulation improves; the periods become more regular, more profuse, and less and less painful. Should pregnancy occur the cure becomes complete. But, on the other hand, cases of extra-uterine dysmenorrhœa are usually aggravated by marriage.

REPORTS OF CASES.

AN INTERESTING CASE OF EXOPHTHALMIC GOITRE.

BY GUTHRIE RANKIN, M.D.

THE pathology of Exophthalmic Goitre is still a matter of speculation, and, while most observers have referred it to disease of the lower cervical sympathetic ganglia, cases are on record in which all the classical symptoms of the disease were present and in which *post mortem* examination revealed a perfectly healthy condition of the sympathetic nerve.

Perhaps no accurate conclusion can be arrived at from the observation of a single case, particularly where, an autopsy being refused, no confirmatory pathological evidence is forthcoming, but the sequence of events in the following history is sufficiently suggestive to make it worthy of record.—Mrs. A., æt. 49, was well known to me since the date of her marriage, upwards of six years ago: previous to that time her health had been excellent, and except for an attack of anæmia in her youth, she had never been ill from an acute disease. For many years she had assisted in the management of a large educational department; and her married life was one of comfort and domestic felicity. She was highly educated, artistic in her tastes, vivacious and cheerful in temperament, and active in habit. She was distinctly of the neurotic type of individual, and though no flaw could be found in her family history it was evident that her sisters and brothers were each, like Mrs. A. herself, possessed of a highly-strung and unstable nervous system. Her father and mother died while Mrs. A. was quite young and no information could be obtained as to the exact causes of their deaths, but the last illness of each of them was of short duration, and the mother seems to have been erratic, emotional, and delicate.

Among the first times of Mrs. A's coming to see me, I observed

that she had a slight enlargement of the thyroid gland; she was unaware of the fact and did not know that her neck was then different from what it had always been. She had never required to get the collar-band of her dress enlarged. I saw her at repeated intervals for slight ailments, mostly connected with her digestive system, but during all the time I knew her till the date of the illness to which these notes refer she was free from organic disease or serious illness. She was of stout build, well-nourished, and bore the appearance of robust health.

About fifteen months ago she began to complain of irregularity of menstruation, flushings, headache, palpitation, sweatings, debility, and the usual train of symptoms which, in a woman of her age, usually indicate the advent of the climacteric. Patches of leucoderma about the neck, arms, and legs, were a source of much concern to her. I now saw her periodically, and observed after a time that she was becoming thin, and that she was unfit for the amount of work and exercise to which she was accustomed. At the periods of her menstruation, which, when the function was regular, gave her little trouble, she suffered from restlessness, insomnia, excitability, and complete anorexia, together with marked deafness and troublesome tinnitus. These symptoms were accompanied by an increase in the size of her thyroid gland, but the swelling subsided and her other discomforts disappeared with the cessation of the menstrual flow.

About the month of June it was first noted that her pulse was abnormally rapid and that her eyes were becoming unusually prominent. The thyroid was now permanently increased in size, but only to a moderate degree, and she occasionally complained of palpitation and pulsation in her neck. The prominence of her eyeballs, the rapid action of her heart, and the throbbing of her carotids were however prominent symptoms only when she was menstruating, and it was hoped that her menopause was accountable for the signs of incipient Graves' disease which she presented.

During August she was much better, and was again able to undertake all her ordinary household and other duties, but

towards the middle of September she developed more pronounced symptoms, and her heart became so tumultuous as to necessitate absolute rest in bed, together with medicinal treatment for its relief. The emaciation was still progressive, but there was no evidence of organic disease. By the beginning of November she was again much better: she gained flesh, her pulse became more quiet, her thyroid, though still large, was not troublesome, her appetite returned, she slept well at night, and, in all respects, she manifested such improvement that she expressed herself as "getting rapidly well." Each menstrual period still caused some recurrence of her symptoms, and she was strongly urged on such occasions to lay herself up entirely, but her nature was so energetic that it was difficult to persuade her of the necessity for this amount of care, and at all times she was apt to exhaust her strength by doing too much. Sometimes, when her heart was excited, there was a suspicious basic systolic murmur, but it disappeared when the rapid action subsided, and there was no increase of percussion dulness. The urine was frequently examined, and, except on two occasions, when it was found to contain sugar, was normal. There was no cough and no increase of temperature. Occasionally she had unaccountable attacks of diarrhoea which quickly yielded to treatment. This satisfactory condition of her health continued till the end of January, when suddenly, after unusual and prolonged exertion, she became much worse.

Her pulse was now so rapid as to be almost uncountable, there was marked increase of proptosis and the thyroid enlargement was not only greater than at any previous time, but had also extended to the right side of the gland, the left lobe, until now, having been the only part affected. She was kept entirely in bed, and for some days seemed to improve under bromide, belladonna, and strophanthus; but on the 6th of February I observed a hesitancy in her articulation, which was quite unusual to her. The following morning this was more pronounced and still more so on the succeeding day, when she herself, for the first time, complained of difficulty in getting her tongue

round some of her words. She ascribed it to dryness of her throat and tongue, but it was remarkable that the ends of long words or of sentences were slurred, so that, while one could readily understand the first few words she spoke, the succeeding ones were more or less unintelligible. Her lips too, though not paralysed, were more immobile than usual and she seemed to speak altogether from her throat. She also now became very restless, was frequently bathed in profuse perspiration, and, in spite of large doses of bromide, got little sleep and almost none that was continuous. She rambled continually but, when spoken to, she brightened up and was able perfectly to understand all that was said to her. Her temperature showed little variation from normal and her pulse was never twice the same, being, at one time thready, thrilling, and uncountable, and at another full, compressible, and numbering from 110 to 130.

On the 9th February, after another bad night, she was still more restless and still more unable to articulate distinctly, and, in addition, the lower part of her face was fixed and expressionless; her pupils were closely contracted and responded to light sluggishly, and her respirations were shallow and had increased to 30. There was no cough and no lung mischief. At night she was very drowsy, her speech had become still more indistinct, saliva dribbled continually from her mouth, and she had difficulty in swallowing even liquid nourishment.

On the morning of the 10th she became less restless and, after two full doses of paraldehyde she obtained a few hours of broken sleep. Except a word here and there it was impossible to understand what she attempted to say. She had difficulty in protruding her tongue, and could only swallow when her nourishment was put well to the back of her mouth with a spoon.

On the 11th her symptoms were all more aggravated, she had lost control of her bladder and rectum, and there was little room for doubt that she was the victim of an acute attack of Bulbar Paralysis.

After another terribly restless night, the morning of the 12th found her completely unconscious and moribund, but with no

diminution of the restlessness. Her temperature was then 101° , respirations 54, pulse, so far as it could be counted, 180. Her breathing became intermittent and more rapid, the temperature gradually rose to 104° , her pulse was uncountable, and on the 13th she died.

During the last two days of her life her face was continually flushed, her eyes were inflamed and constantly open, all expression had vanished from the lower part of her face, and her lower jaw was permanently dropped. At no time was there any suspicion of paralysis of her limbs, and till the moment of her death her incessant restlessness was her most distressing symptom.

A *post mortem* examination was not allowed, but the onset of bulbar paralysis was proof positive of disturbance of some sort in the medulla oblongata. Now it is admitted that the succession of symptoms presented by women at the time of their climacteric is due to some interference with vaso-motor stability. It is also believed by many competent observers that the various phenomena of exophthalmic goitre are best explained by a hypothesis of paralysis, or at least interference with the proper action of the various centres found on the floor of the fourth ventricle. The presence of a vaso-motor centre in the upper part of the floor is an established fact, and there is reason to believe that there is probably another centre in its immediate vicinity, regulating the action of the sweat glands, and yet another close by having under its control the bodily temperature. In close juxtaposition are the nuclei of the vagus, hypoglossal, spinal-accessory, auditory, and other important nerves. Successive disturbance of these several centres would explain, in every detail, the varying features of this interesting case, and it is at least a fair assumption that the bulbar paralysis was as likely to be due to extension of existing mischief in the medulla as to any other and more remote cause.

PERISCOPE.

URINARY AND RENAL DISEASES.

BY ROBERT SAUNDBY, M.D. EDIN., F.R.C.P. LOND.
PROFESSOR OF MEDICINE, MASON COLLEGE.

BRIGHT'S DISEASE.

Acute Nephritis nach Schutzpockenimpfung.—Perl (*Berl. klin. Woch.*, 1893, No. 28).—Perl vaccinated four children; in one, on the fifth day the urine was diminished, turbid, albuminous, and deposited red blood corpuscles, leucocytes, and casts. The acute nephritis disappeared in six days; there was no fever or visceral disturbance. The other children shewed no urinary derangement. The case illustrates the law that any infective process may set up, and often does set up, an acute nephritis, which is generally overlooked, but occasionally becomes aggravated by accidental circumstances, such as a chill, or a heavy meal too early in convalescence and then becomes manifest. The lesson this knowledge ought to convey is that those precautions during acute illness and convalescence which have been handed down to us by the traditions of practice, are founded on sound principles and are deserving of careful observation and respect, even in the course of an artificially induced process like vaccinia.

A form of chronic Bright's Disease other than typical fibroid kidney without Albuminuria.—Stewart, D. D., Pan-American Medical Congress—Summary (*Brit. Med. Journal*, 1893, vol. ii, p. 849).—From the summary it is not clear in what respect this group of cases differs from typical fibroid kidney, but modern observations have made it plain that this kidney originates in various ways and has not always precisely the same course and clinical history.

Sur l'albuminurie dans la malaria infantile.—Ferreira,

Clemente (*Revue mens. des malad. de l'enf.*, 1893, xi. p. 97.)—The author has frequently met with albuminuria in the malarial affections of children with and without fever. In a series of cases these passed on to the development of œdema. Genuine nephritis may be also observed to follow malarial infection. Treatment by quinine was successful.

Disseminated fibrosis of the Kidney in malignant Endocarditis.—Hollis, W. Ainslie (*Royal Medical and Chir. Soc., The Lancet*, 1893, vol. ii., p. 1386.)—The author considers that he has established that certain “nuclear bodies,” found in the nephritis which is associated with malignant endocarditis and aortitis, are the specific elements of the lesion, and are to be found in the vascular lesion as well as in the kidney. Dr. Herringham could see nothing in the specimens but the appearances of ordinary fibrosis. [Unquestionably the renal lesion in these conditions is infective, and micro-organisms are abundantly present, but we do not recognise the “nuclear bodies” referred to. Rep.]

Sur le régime et le traitement des albuminuries.—Sée, G. (*Bull. de l'Acad. de Med.*, lvi., 35, 36.)—The author distinguishes the following causes of nephritis:—

1. Functional or Physiological Albuminuria. This occurs generally in the morning or after violent exercise; it is perhaps induced by the action of ptomaines and is influenced by cold baths and mealtimes. The kind of food does not affect it, so that diet is useless as a remedy. The patient should avoid cold and violent muscular exertion, and should not be allowed to consider himself sound.

2. Albuminuria dependent upon heart weakness. This symptom does not indicate nephritis and calls for no special treatment, the proper indication being the state of the circulation with the presence of œdema.

3. Albuminuria in Nephritis. Chronic parenchymatous Nephritis. This is the place for milk diet, 3 litres daily, which are enough for any man. The patient should be enjoined to rest completely.

4. Hæmatogenous and Alimentary albuminuria are beset by hypotheses. It is not certain whether the albumen of the blood is altered so that it filters through the kidneys. The only certain hæmatogenous nephritis is that met with in malaria. Just as little can be said respecting alimentary albuminuria.

5. Albuminuria from poisons, bacteria, toxines, ptomaines and poisonous products of tissue change. He says the renal affection in cases of mineral poisoning is only part of a general constitutional derangement and therefore does not interest us! That he will not go into the subject of acute infective nephritis. He gives diphtheritic nephritis as the best illustration of nephritis due to toxines, and says milk diet will cure the nephritis of pregnancy which he somehow includes in this group. Finally he condemns the use of diuretics, heart tonics and iodide of potassium, but recommends strontium and calcium with diaphoretics, warm baths, steam baths, and pilocarpine. The patient should be protected against cold and forbidden to use hot or cold baths, while the state of his stomach should be carefully watched as it is generally catarrhal. He recommends that the milk should be sterilised, as very often where it is not sterilised it is borne badly, though admixture of lime water may be tried. If it has to be abandoned he recommends toast soaked in tea, revalenta, potatoes cooked with butter, rice and milk, hard eggs, tea. In other cases bouillon with a yolk of egg, white fish, macaroni. In very severe nephritis with œdema and much albuminuria he gives white meats, such as veal and poultry, calves' sweetbread, brains, fats, tea or coffee, and sometimes kephir (cow koumiss). In interstitial nephritis he removes most restrictions, allowing a simple mixed diet, with the object of maintaining the patient's strength. He permits a little alcohol, especially in the form of red Bordeaux wine.

Sur le régime alimentaire des néphritiques chroniques.—Dujardin-Beaumetz (*Ibid.*, 35, 1892).—Dujardin-Beaumetz speaks only of chronic nephritis; in this he considers the great point to be considered is the balance of products of tissue change and poisonous food derivatives which remain in the body, hence he forbids exertion, disinfects the bowel with Benzo-naphthol and

enjoins a vegetarian diet with milk and eggs. Where uræmia threatens milk diet must be employed, in more favourable cases vegetable diet, and in the most favourable meat diet. He praises the good effects of vegetable diet, not only in cardiac and vascular diseases but also in gastro-intestinal affections, where it may be of great use.

L'albuminurie au point de vue de l'indication thérapeutique ; la pathogénie de l'albuminurie survenant au cours du diabète.—Lancereaux, E. (*Ibid*, 40, 1892.—Lancereaux affirms that where the renal vessels are affected iodide of potassium acts medicinally on the kidneys, but when the parenchyma is involved, tincture of cantharides should be used.

Milk is indicated when the epithelium is much injured, and if uræmic symptoms appear: it probably acts as a diuretic; light diet should be given, eggs are not excluded, and beer is preferred to wine!

Albuminuria occurs frequently in constitutional diabetes of hereditary origin, and is associated with arterio-sclerosis; it is less common in nervous diabetes; and least of all in pancreatic diabetes, although this is the most serious form.

Sur le traitement de l'albuminurie gravidique.—Jaccoud (*Ibid.*, No. 6, 1893.)—Jaccoud recommends milk diet for acute nephritis and the nephritis of pregnancy. Next to this remedy he values inhalations of oxygen.

Ueber die Natur und Entstehung der Nierencylinder.—Lubarsch, O. (*Centrbl. f. allgem. Pathol.*, 1893, iv., 6).

Zur Bildung der hyalinen Harncylinder.—Ribbert (*Ibid.* 11).

Die Harncylinder in eiweissfreien Urin.—Radomyski, S. (*Ges. Abhandlungen aus der med. Klinik zu Dorpat*. Wiesbaden, 1893, p. 241).

Ueber die Entstehung der gewundene Harncylinder und der Spiralfäden im Auswurf.—Senator, H. (*Deutsches Arch. f. Klin. Med.*, L.I., 4 and 5, p. 413. 1893).

The question is, are hyaline cylinders formed from converted fibrin or from altered cell protoplasm, from a transudation or an exudation?

Lubarsch cannot admit that the homogeneous cylinders stained after Weigert's method by Israel and Ernst are genuine fibrine cylinders, because there are a number of substances in the human body which take up Weigert's stain although they have nothing to do with fibrin, and also because such cylinders are stained by agents which do not stain fibrin. Moreover these fibrin cylinders are not only met with where a richly albuminous exudation has been poured out ; and in conclusion he refers to the direct observation of the formation of these cylinders from droplets of exudation derived from the protoplasm of the epithelium of the renal tubules. He has never seen stringy fibrine become converted into homogenous fibrine as Israel asserts.

Ribbert, on the other hand, says that by temporarily clamping the renal artery you can with certainty obtain the formation of hyaline cylinders staining or not staining by Weigert's method. He thinks it is most probable that the great majority of hyaline casts are formed by coagulation of a transudation, and that only a small part are derived from protoplasmic masses. The ordinary hyaline cylinders are formed by the coagulation of albuminous exudate, but not fibrine. Fibrine occurs in more intense inflammations, but such cylinders are distinct, and he agrees with Lubarsch in not having observed any transition stages between stringy fibrine and the homogeneous cylinders.

Radomyski finds that tube casts are present in the urine of quite healthy people, and relatively often in the urine of sick people who have no albuminuria, in which case their occurrence is dependent upon circulatory disturbances.

Senator thinks the convoluted urinary casts (mucous casts) are derived from urinary tubules which have been temporarily stopped, and out of which the soft material is extruded by the current of urine.

Intermittent Albuminuria.—Charles, T. Cranstoun (*Saint Thomas's Hospital Reports*, vol. xxi.)—He has observed transitory albuminuria occurring among people subjected to anxiety or overpressure of business, interference with respiration, as from tight lacing, marked constipation, prolonged muscular exertion,

and feeding with peptones or so-called peptones. He does not agree with Grainger Stewart who found the proportion of cases to increase as age advances. It is generally found after breakfast, and is often associated with catarrhal affections and a tendency to headache.

He thinks it is sometimes caused by mal-assimilation of food, but it also depends in all probability on the constitution of the blood and the state of the circulation. Exposure to cold and depressing emotions are also efficient causative factors. He does not believe there are any pathological changes in the kidneys as a rule, but when casts have been seen there may be *patches* of renal inflammation.

He does not think that structural changes result in the great majority of cases, but when the albuminuria has been of long duration and there is a personal history of Bright's disease; where the specific gravity is low, casts are present, nocturnal micturition is frequent, and there is evidence of cardio-vascular change or retinal degeneration, or cases occurring after forty where there is a tendency to gout should be regarded with suspicion! [We should have thought several of the last named symptoms would have warranted a diagnosis of Bright's disease. Rep.]

Albuminuria without manifest organic renal lesion.—Vanderpool, Waldron P. (*New York Medical Record*, 1893, vol. ii., p. 611).—This paper is a review of much that has been written within recent years on this subject.

Suppression of urine for twelve days, with recovery.—Ross, J. W. (*Ibid.*, p. 815).—A boy aged ten got suppression of urine during an attack of fever, probably malarial. He was kept in bed between blankets, treated by rubefaction over the loins, calomel, salines, and milk diet. He was nervous and anæmic. The bladder was always empty. At the end of twelve days he voided a pint of normal urine of low specific gravity and recovered. Three years later he died of "acute nephritis."

High tension, headache, and albuminuria.—Gardner, H. Willoughby (*The Lancet*, 1893, vol. ii., p. 1056).—The patient,

a male aged 35, had suffered from severe recurrent headaches from boyhood; no family history of headache or gout, except father, who had similar headaches all his life, and at 58 suffered from "softening of brain" from which he eventually died. The headache was occipital and vertical; intense throbbing associated with giddiness, but never with nausea or vomiting. Urine 1015, acid, contained a distinct trace of albumen, but no casts. The heart's apex was not displaced. Under treatment directed to reduce arterial tension, forbidding beer and guarding against constipation, the patient recovered.

Five cases of Albuminuria Gravidarum; with eclampsia for which venesection was performed in two; recovery in all.—Kirk, Robert (*The Lancet*, 1893, vol. ii., p. 247).—The two cases with eclampsia had no anasarca; the others with anasarca had no convulsions. The urine in all cases "was of the frothless variety." In two cases the children were dead.

MISCELLANEOUS.

Some cases of Moveable Kidney.—Gilford, Hastings (*The Lancet*, 1893, vol. ii., p. 1559).—The author has collected twenty-five well-marked examples of disorder produced by moveable kidney; in six there was intermittent hydronephrosis; in one, a girl of 11, attacks of pain and vomiting, the left kidney was moveable and hydronephrotic. The treatment where belts and pads failed was by nephrorrhaphy. The author comments upon the great frequency of the condition in women.

Floating Kidney in the female.—Mathieu, Albert (*The Lancet*, 1893, vol. ii., p. 1544).—As the result of his researches he had found that 85 out of 306 women who were being treated in hospital for various ailments, were also the subjects of abnormal mobility of the kidney. This was present in 32 out of 46 women suffering from dyspepsia. It is rarer below the age of 20.

From 15 to 20 12·13 per cent.

„ 20 to 25 22·23 „

„ 25 to 50 40 „

„ 50 to 70 25 „

In one half of the cases only a part of the kidney can be felt ; in the rest it can be completely isolated, and exceptionally it is completely floating. The influence of pregnancy is shewn by 104 giving only 12 cases, while 130 uni- and multiparæ gave 44 examples of this displacement. He thinks dyspepsia is kept up by the renal condition and that it can give rise to "crises" of vomiting and pain. He does not think that it bears any constant relation to the displacement, but is the result of neurasthenia. [Nephroptosis may cause pyloric obstruction with its necessary results, as was shewn in Mr. Kendal Franks' case, but in many of the instances in which it is present the gastric symptoms are merely those of neurasthenia. Rep.]

Pyonephrosis of the lower half of a kidney with two ureters.—Hudson, Leopold (Path. Soc. The *Lancet*, 1893, vol. ii., p. 1006).—A woman aged 58 died of septic absorption from a sloughing strangulated femoral hernia. Lower half of right kidney dilated with cavity containing thirty-two ounces of pus, and communicating with the urethra by a dilated ureter which opened just in front of the sphincter vesicæ. The upper half of the kidney was normal and was connected by a healthy ureter with the bladder, the opening being in the normal position. The left kidney and ureter were normal, and there was nothing in the history to account for the origin of the pyonephrosis. In the discussion Mr. Bland Sutton referred to the second ureter in men as representing a persistent Müller's duct.

Total Suppression of Urine in a patient seventy-four years of age; nephrotomy; recovery.—Fraser, James W., and Parkin, Alfred (The *Lancet*, 1893, vol. ii., p. 688).—A married woman, aged 74, had suffered from two short illnesses marked by shivering and rise of temperature without albumen or blood in the urine. In June 1893 her urine began to be irregular in amount, then diminished greatly and she was sick; there was pain in the left loin; the bladder contained only half an ounce. Diuretics and diaphoretics failed to do any good; she became drowsy; no tumour could be felt. There was no twitching or sickness. An incision was made into the left kidney, when six

ounces of urine came away, but no stone could be felt with the finger or with a probe in the ureter. A drainage tube was inserted, and the patient recovered with a sinus in the loin through which the bulk of the urine is passed. They attribute the obstruction to mobility of the kidney, hydronephrosis, and kinking of the ureter at the infundibulum; the right kidney being absent.

URINE.

Ueber das Verhältniss von Eiweisssgehalt und Eitergehalt in Urinen.—Goldberg, B. (*Centrlbl. f. d. med. Wissensch.*, 1893, No. 36).—Goldberg has endeavoured to determine the quantity of albumen in the urine which corresponds to the presence of a certain amount of pus and formulates the rule that if the albumen-pus quotient is greater than 1 : 50000 the albuminuria is due to something more than the admixture of pus. That is to say, the albumen of the filtered urine is estimated by Esbach's methods, and the pus corpuscles are counted in the same way as blood corpuscles in the hæmocyto-meter, but the pus must be diluted twenty times. Suppose the result gives 625000 pus cells and 5 per mille albumen, this equals 1 per cent. albumen to 125000 cells; or as in another case, 200000 cells, 2·5 per mille albumen, which gives $\frac{200000}{25} = 1 : 80000$. In cases where the albuminuria was not simply pyogenic he obtained such numbers as 1 per mille albumen, 6000 pus cells, or 1 : 6000.

Chromic acid as a test for albumen and bile pigment.—Rosenbach, O. (*Deutsch. Med. Wochenschr.*, 1893).—Rosenbach recommends a five per cent. solution of chromic acid as a urinary reagent. When dropped into albuminous urine yellow flocculi are precipitated; if bile pigments are present an intense green colour is developed. The chromic test may be employed by saturating strips of white blotting paper with the solution, which can be dipped into the suspected urine.

Sulphonal and Hæmato-porphyrinuria.—Smith, R. Percy (*Saint Thomas's Hospital Reports*, 1893, p. 241).—He reports three cases of hæmato-porphyrinuria in lunatics, treated by

sulphonah, with one death not attributed to the drug. The urines were studied with care by Dr. MacMunn, and the presence of this pigment and some other chromogens determined by the spectroscope and chemical agents. He gives some account of the literature of this subject since it was first discovered by MacMunn, and points out that it is not necessarily associated with the administration of sulphonah. It is curious that so many of the cases reported have been in women. There was no marked change in number or character of the blood corpuscles in any of the author's cases, nor any evidence apart from the urine of sulphonah poisoning.

Dark urine in pernicious anæmia.—White, W. Hale (Clinical Society. The *Lancet*, 1893, vol. ii., p. 1129).—In both instances the dark colour of the urine was due to hæmoglobin, and not to pathological urobilin.

Amœbæ in the Urine.—Posner (*Berl. klin. Woch.*, July 10th, 1893).—The patient, a male aged 37, always lived in Berlin, previous health good, attacked with shivering, malaise, bloody urine after getting wet. Urinary deposit shewed besides red blood cells, leucocytes, renal epithelium, and cylinders, bodies eight or ten times as large as a white blood corpuscle, containing red blood corpuscles, etc., in their interior, and changing in shape. They disappeared in six days, but in the course of the next twelve months the patient had five similar attacks, attributed by the author to nephritis set up by the amœbæ which he thinks were lodged in the renal pelvis.

REPORTS OF SOCIETIES.

MIDLAND MEDICAL SOCIETY.

A meeting of the Midland Medical Society was held on Wednesday, April 18th, at the Medical Institute, the President, Mr. A. H. EVANS, in the chair.

Mr. George Heaton shewed an infant, five weeks old, with a

large venous nævus situated deeply in the substance of the tongue. The tongue was very much enlarged, bulging the cheeks and protruding from the mouth, and interfering with deglutition and respiration. The nævus had increased considerably in size since the patient's birth ; and operative measures for its cure were discussed.

Specimens.—Mr. Chavasse shewed the following specimens :—

1. The Œsophagus and Stomach of a man who had died of pneumonia six days after gastrostomy had been performed by Witzel's method, for a carcinomatous growth situated in the upper portion of the œsophagus. Attention was called to this mode of operating as permitting the patient to be fed at once, and also as preventing any regurgitation of food from the gastric fistula. The necessity of securely anchoring the india rubber tube to the stomach wall by some unabsorbable sutures was pointed out, for if catgut were employed, as in this case, the tube was apt to become displaced and difficulty in its reintroduction experienced.

2. The Bladder of a man, æt. 52, with a large mass of round-celled sarcoma growing from the fundus. It had been removed through a suprapubic opening one month before death, but had rapidly recurred, and with recurrence, secondary growths had manifested themselves in the muscles on the inner aspect of both thighs. Patches of new growth were also found in the left kidney, and the ureter on the right side was completely blocked.

3. A very large Hydro-nephrotic Cyst removed from the body of a man aged 42. The history shewed that the first symptoms were noted twenty years before, and that at intervals hæmaturia was profuse. Death finally resulted from chronic alcoholism.

Dilated Cæcum.—Dr. Douglas Stanley shewed this specimen which was taken from a case of intestinal obstruction. On *post-mortem* examination, there was found a condition of general peritonitis with some fæcal matter in the peritoneal cavity ; the cæcum occupied the left side of the abdomen, being apparently swung over, after being distended with fæces. There was a sharp

bend between the transverse and descending part of the colon, which would seem to have prevented or hindered the onward passage of intestinal contents, with consequent dilatation of the cæcum. In passing over across the middle line, a well-marked "kink" had taken place in the ascending colon a short distance above the cæcum and in the lower part of the ileum, forming a "half-volvulus" in each instance. On opening the sac formed by the distended cæcum, it was found to contain about one pint and a half of liquid fæces. The mucous membrane shewed large ulcerated patches (stercoral ulcers) with perforation at some points. The appendix was quite healthy.

Dr. J. W. Russell read a paper on "Notes on the use of Oxygen Inhalations," of which the following is an abstract:—The oxygen of the atmospheric air has been proved to be sufficient to nearly saturate the hæmoglobin of the blood even in asphyxia. Its use would therefore seem to be indicated only where there is a diminished entry of air into the chest, and much good is not to be expected from it in ordinary cases of pneumonia, cases of heart failure, anæmia, etc. The writer's clinical experience supports this view, but points to the value of oxygen in cases in which the respiratory act is failing.

THE INTERNATIONAL MEDICAL CONGRESS AT ROME.

It is not too late to join in the universal expression of thanks to our Italian colleagues for the warm-hearted welcome and magnificent hospitality which they exhibited to those who ventured to attend the recent Roman Congress. Such a gathering in the most illustrious and most interesting of cities could not fail to afford much that was memorable, yet it cannot be denied that the organisation of the Congress, the sectional meetings, and even the public fêtes and receptions do not constitute features willingly recalled, or of which we can with truth speak favourably. The gathering was enormous, but the arrangements had been made on a sufficiently large scale, and we believe if they had been carried out as planned they would

have succeeded. But there was a want of a guiding spirit to animate and set in motion the vast machinery ; it seemed as if it was supposed that after the Congress had been opened by the Royal ceremony in the Costanzi Theatre, it would work of itself. The Reception room was closed, the Secretary-General's office was abandoned, and from the second day of the Congress the organisation was at a standstill. The entertainments were either terribly overcrowded because everybody in Rome was there, or half empty because the arrangements for distributing tickets had broken down.

It is to be hoped that we shall never again see non-medical visitors allowed to enroll themselves as members by merely paying the entrance fee. It is doubtful whether even when limited to medical practitioners the Congress is not too large and heterogeneous to be useful. Possibly periodical separate gatherings of specialists interested in particular subjects may some day with advantage take the place of a general Congress.

No one could have made a better president than Professor Baccelli ; his genial presence and ready eloquence enabled him to carry all before him, and where he was, there the Congress was at least in appearance a success.

The greatest pleasure was no doubt given to the visitors who were so fortunate as to share in the smaller and personal hospitalities so freely dispensed. These bring into personal acquaintance men whose only previous relations have been a common object of study and the interchange of books and letters. Such moments are among the rarest and happiest in life, and of such Rome afforded many fruitful opportunities.

Of the nationalities represented, the Germans were most in evidence, and next to them the French. The English made but little show though numerically they were not weak, and it was too early for our American cousins who were there in small force.

The 1896 meeting will be held in Moscow, a place sufficiently remote to afford a reasonable prospect of a moderate attendance, which will greatly conduce to the success of the gathering and to the comfort of those who will be there.

PUBLISHERS' DEPARTMENT.

New Inventions, Drugs, etc.

We have received from Messrs. BURROUGHS & WELLCOME samples of the new antiseptic preparation, *Phenosalyl*. This preparation consists of a mixture of Carbolic, Salicylic and Benzoic Acids, melted together and dissolved in Lactic Acid. It would appear from the results of bacteriological trials that Phenosalyl possesses very unusually vigorous bactericidal properties, being far superior in this respect to Carbolic Acid alone, both as regards time of exposure and strength of solution. It is said neither to irritate the skin, nor to corrode instruments. One of the samples sent is especially prepared for the saturation of gauze dressings.

New Books, etc., Received.

- Clinical Lectures on Medicine and Surgery. By Various German Authors. Third Series. London : The New Sydenham Society. 1894.
- A Collection of the Published Writings of WILLIAM WITHEY GULL, Bart, M.D., F.R.S., Physician to Guy's Hospital. Edited and Arranged by THEODORE DYKE ACLAND, M.D., Physician to St. Thomas's Hospital. London : The New Sydenham Society. 1894.
- Lexicon of Medicine and the Allied Sciences. Twenty-first Part. P-Pin. London : The New Sydenham Society. 1893.
- Report presented to the Thirty-fifth Annual Meeting of the New Sydenham Society, held at Newcastle, August 4th, 1893.
- On Seborrhœa and its Consequences. By JOSEPH FRANK PAYNE, M.D., F.R.C.P., Physician to St. Thomas's Hospital. London : John Bale and Sons. 1894.
- An American Text-Book of the Theory and Practice of Medicine. By American Teachers. Vol. ii. Edited by WILLIAM PEPPER, M.D., LL.D., Provost and Professor of the Theory and Practice of Medicine and of Clinical Medicine in the University of Pennsylvania. Philadelphia : W. B. Saunders. London : F. J. Rebman. 1894.
- An American Text-Book of Gynæcology, Medical and Surgical, for Practitioners and Students. By American Teachers. Edited by J. M. BALDY, M.D. Philadelphia : W. B. Saunders. London : F. J. Rebman. 1894.
- An American Text-Book of the Diseases of Children. By American Teachers. Edited by LOUIS STARR, M.D., Physician to the Children's Hospital, Philadelphia ; assisted by THOMPSON S. WESTCOTT, M.D., Attending Physician to the Dispensary for Diseases of Children. Philadelphia : W. B. Saunders. London : F. J. Rebman. 1894.
- An International System of Electro-Therapeutics. By HORATIO R. BIGELOW, M.D., and Thirty-eight Associate Editors. Philadelphia : The F. A. Davis Company. London : F. J. Rebman. 1894.
- Lectures on Auto-Intoxication in Disease. By CHAS. BOUCHARD, Professor of Pathology and Therapeutics, and Physician to the Hospitals, Paris. Translated, with a Preface, by THOMAS OLIVER, M.A., M.D., F.R.C.P., Professor of Physiology, University of Durham. Philadelphia : The F. A. Davis Company. London : F. J. Rebman. 1894.

- Hernia : Its Palliative and Radical Treatment. By THOMAS B. MANLEY, A.M., M.D., Visiting Surgeon to Harlem Hospital. London : F. J. Rebman.
- The Physician's Wife. By ELLEN M. FIREBAUGH. Philadelphia : The F. A. Davis Company. London : F. J. Rebman. 1894.
- Neue Methode der Therapie der Lungentuberculose. Mittheilung des Herrn Dr. L. M. CARASSO, Director des Militär-Lazarettes in Genna.
- Wright's Prescription Book. Bristol : J. Wright and Co.
- Essentials of Practice of Pharmacy. By LUCIUS E. SAYRE, Ph.G., Professor of Pharmacy and Materia Medica of the School of Pharmacy of the University of Kansas. Second edition. Philadelphia : W. B. Saunders. 1894.
- Uric Acid as a Factor in the Causation of Disease. By ALEXANDER HAIG, M.A., M.D., Oxon., F.R.C.P., Physician to the Metropolitan Hospital. Second Edition. London : J. and A. Churchill. 1894.
- Defective Articulation resulting from Cleft Palate. By WILLIAM VAN PRAAGH. London : Kegan Paul, Trench, Trübner, and Co. 1894.
- Fifth Annual Report of the Derby Borough Asylum.
- Eighty-first Annual Report of the Royal Institution for the Instruction of Deaf and Dumb Children, Edgbaston.
- Thirty-third Annual Report of the Cincinnati Hospital.
- The Ingleby Lectures, 1894, on The Common Forms of Dyspepsia in Women. By ROBERT SAUNDEY, M.D. Edin., F.R.C.P., Examiner in Medicine to the English Examining Board, Professor of Medicine, Mason College, etc. Birmingham : Cornish Brothers. 1894.
- Clinical Medicine : A Manual for the Use of Students and Junior Practitioners. By JUDSON S. BURY, M.D. Lond., F.R.C.P., Senior Assistant Physician to the Manchester Royal Infirmary. London : Charles Griffin and Company Limited. 1894.
- Year-Book of the Scientific and Learned Societies of Great Britain and Ireland. Eleventh Annual Issue. London : Charles Griffin and Company Limited. 1894.
- Essentials of Nervous Diseases and Insanity. By JOHN C. SHAW, M.D., Clinical Professor of Diseases of the Mind and Nervous System, Long Island College Hospital Medical School. Philadelphia : W. B. Saunders. 1894.
- Sur la Cure Radicale des Hernies, Modification du Taux de l'Urée dans l'Urine, et De l'Hydronéphrose Intermittente. Par le Docteur LUCAS-CHAMPIONNIERE, Chirurgien de l'hôpital Saint-Louis. Paris : Coccoz, Libraire-Éditeur. 1892, 3, and 4.

* * * Authors can have reprints of articles at the following rates :—

Not exceeding 8 pages	...	8/-	per 100
„ 16 „	...	12/6	„

The re-arranging of the type is the principal cost in the production of these reprints, so that smaller numbers will be the same price. Larger numbers at a proportionate reduction.

The Subscription (prepaid) to the *Birmingham Medical Review* is 6s. per annum, post free.

NOTICE.—All Communications should be addressed to the Printers and Publishers, Messrs. Hall and English, 71, High Street, Birmingham.

THE Birmingham Medical Review: A MONTHLY JOURNAL OF THE MEDICAL SCIENCES.

EDITED BY

JAS. W. RUSSELL, M.D. CANTAB., M.R.C.P.

AND

O. J. KAUFFMANN, M.D. LOND., M.R.C.P.

Assisted by the following Editorial Committee:—

ERT BARLING, M.B., F.R.C.S.
ANGLEY BROWNE, F.R.C.S.
M. CHAPMAN, M.D., F.R.C.P.
HARNLEY, M.D.
OLLIER, M.D. F.R.C.P.
RD DEANESLY, M.D., F.R.C.S.
Y EALEN, M.R.C.S.
EDGE, M.D., F.R.C.S., M.R.C.P.
UR FOXWELL, M.D., F.R.C.P.
HAIG, M.D.
HASLAM, F.R.C.S.
HEATON, M.B., F.R.C.S.
STOCK HILL, M.D.
LEWIS, M.D.

JORDAN LLOYD, M.B., F.R.C.S.
ALBERT LUCAS, F.R.C.S.
C. A. MACMUNN, M.D.
H. MANLEY, M.B.
FRANK MARSH, F.R.C.S.
CHRISTOPHER MARTIN, M.B., F.R.C.S.
BENNETT MAY, M.B., F.R.C.S.
J. T. J. MORRISON, M.B., F.R.C.S.
E. N. NASON, M.B.
LLOYD OWEN, F.R.C.S.I.
J. PIETERSEN, L.R.C.P., M.R.C.S.
C. E. PURSLOW, M.D.
GUTHRIE RANKIN, M.D., F.R.C.P.
J. R. RATCLIFFE, M.B.

GEO. REID, M.D.
ROBERT SAUNDY, M.D., F.R.C.P.
T. SYDNEY SHORT, M.D., M.R.C.P.
ROBERT M. SIMON, M.D., M.R.C.P.
J. LIONEL STRETTON, L.R.C.P., M.R.C.S.
C. W. SUCKLING, M.D., M.R.C.P.
LAWSON TAIT, M.D., F.R.C.S.
JOHN W. TAYLOR, F.R.C.S.
THOS. W. THURSFIELD, M.D., F.R.C.P.
T. LAW WEBB, L.R.C.P., M.R.C.S.
E. WOOD WHITE, M.D.
E. T. WILSON, M.B., F.R.C.P.
T. STACEY WILSON, M.D., M.R.C.P.
THOS. WILSON, M.D., M.R.C.S.

CONTENTS:

Original Articles.

Pneumonia. By ROBERT M. SIMON, M.D., M.R.C.P. ...	1
Some Points in the Pathology of Leucocythæmia. By DOUGLAS STANLEY, M.B. ...	14
Abstract of Theory of Mechanism of Cerebral Injury by Contre-Coup. By F. J. ALLEN, M.A., M.B. ...	26

Reports of Cases.

Two Cases of Pyrexia. By T. SYDNEY SHORT, M.D. ...	27
Two Cases of Hereditary Chorea, occurring in Twins. By JAMES W. RUSSELL, M.D., M.R.C.P. ...	31

Periscope.

Surgery ...	33
Physiological and Pathological Chemistry ...	39

Reports of Societies.

British Medical Association. Birmingham and Midland Counties Branch ...	45
Midland Medical Society ...	50

Reviews of Books.

Jackson Clarke on Cancer, Sarcoma, and other Morbid Growths ...	57
Eccles on Sciatica ...	59
Cotterell on Syphilis ...	60
Oliver's Manual of the Diseases Peculiar to Women ...	61
The Students' Hand-book of Gynecology ...	62
Slagg on Sanitary Work in smaller Towns and Villages ...	62

INTERNATIONAL MEDICAL CONGRESS ...	54
NEW INVENTIONS, DRUGS, ETC. ...	63
NEW BOOKS, ETC. ...	64

LONDON:

J. & A. CHURCHILL, 11, NEW BURLINGTON STREET, W.

BIRMINGHAM:

HALL & ENGLISH, HIGH STREET.

Entered at Stationers' Hall.

OXYGEN FOR INHALATION.

OXYGEN has long been known as a successful antidote to asphyxia; until lately, however, its use has been greatly restricted by the difficulty of producing the pure gas in sufficient quantity. This difficulty having been overcome by the use of Brin's method, and compression into *strong weldless steel cylinders*, the use of Oxygen has become more general.

It has only lately (*B.M.J.*, January 23, p. 172) been recommended by Drs. Lauder Brunton and Prickett as a most valuable restorative of the respiration in pneumonia; and by Dr. Foy after the use of anæsthetics.

It may be administered by a special apparatus, or simply by attaching a vulcanite, ivory, or bone mouth-piece to the steel cylinder by means of an india-rubber tube; the latter method is, however, somewhat wasteful, and liable to allow a too rapid supply of the gas, which should be avoided. On this account we strongly recommend the use of an india-rubber bag connected by a 3-way vulcanite tap and tubing with the cylinder and with the mouthpiece. By this arrangement the bag can be filled with oxygen (or if required, a mixture of air and oxygen), and then administered with comfort to the patient.

We can supply the gas in steel cylinders in quantity at the following prices, viz. :—

		Weekly rental on cylinders.	Prices of cylinders to purchasers.
8 feet at 4d.	per foot	1/-	25/-
12	„ 4d. „	1/-	32/6
20	„ 3½d. „	1/-	35/6
40	„ 3d. „	1/3	47/-

We are in a position to supply the above at any time on the shortest notice.

T. & W. & W. SOUTHALL.
PHARMACEUTICAL CHEMISTS,
17, BULL STREET, BIRMINGHAM.

MILKMAID BRAND CONDENSED MILK

The BEST for ALL PURPOSES.

FROM THE

British Medical Journal,

JANUARY 21st, 1893.



We have examined several samples of the Milkmaid condensed milk, including the English Milkmaid and Swiss Milkmaid brands prepared by the Anglo-Swiss Condensed Milk Company. It is claimed that these condensed milks are made from pure cow's milk, containing all its original fat, and that they are free from all additions except cane sugar—that is sucrose. The results of our analyses show that these statements are perfectly accurate. The company have several factories, three of them being in England. We have inspected the factory at Aylesbury, and have observed every step in the process of production, which is of considerable interest.

In view of the fact, to which we recently called attention, that very large quantities of so-called "condensed milk," practically devoid of fat, are sold, it is of great importance to be able to rely on obtaining condensed milk containing its proper amount of fat, and not made with unwholesome sugars. We are able to recommend the Anglo-Swiss Company's Milkmaid brands as being what they are represented to be, and as thoroughly reliable.

Samples free to the Profession on application to the
ANGLO-SWISS CONDENSED MILK CO., 10, Mark Lane, LONDON, E.C.

Scottish Provident Institution.

BIRMINGHAM OFFICE—95, COLMORE ROW.

ECONOMY — EQUITY — SECURITY.

THIS SOCIETY differs in its principles from other Offices. Its terms are specially adapted to the requirements of Medical Men and others whose Income is dependent on continuance of health.

INSTEAD of charging rates higher than are necessary, and afterwards returning the excess in the shape of periodical Bonuses, it gives from the first as large an Assurance as the Premiums will with safety bear, reserving the *whole Surplus for those Members who survive the period at which their premiums, with compound interest at 4 per cent. amount to the sums assured*—no share being given to those by whose earlier death there is actual *loss* to the Common Fund.

The ~~WHOLE~~ PROFITS go to the Policyholders, on the above system which is at once safe, equitable, and favourable to good lives. The SIXTH SEPTENNIAL INVESTIGATION showed a SURPLUS of £1,051,035 which, after reserving £350,345 for future division, was divided among 9384 Policies entitled. The first Bonuses ranged from 18 or 20 to upwards of 34 per cent. on sums assured.

The next Division of Profits will be made at 31st December, 1894.

The FUNDS (*increased in 1892 by* £324,944) are now over

EIGHT MILLIONS (£8,126,375).

The PREMIUMS are so moderate that at most ages an assurance of £1200 or £1250 may be secured from the first for the same yearly payment which would generally elsewhere assure (with profits) £1000 only.—the difference being equivalent to an immediate and certain "Bonus" of 20 to 25 per cent.

Annual Premiums for £100 at Death (with Profits).

AGE NEXT BIRTHDAY	...	25	*30	35	40	45	50
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Payable during Life	...	1 18 0	2 1 6	2 6 10	2 14 9	3 5 9	4 1 7
Limited to 21 Payments	...	2 12 6	2 15 4	3 0 2	3 7 5	3 17 6	4 12 1

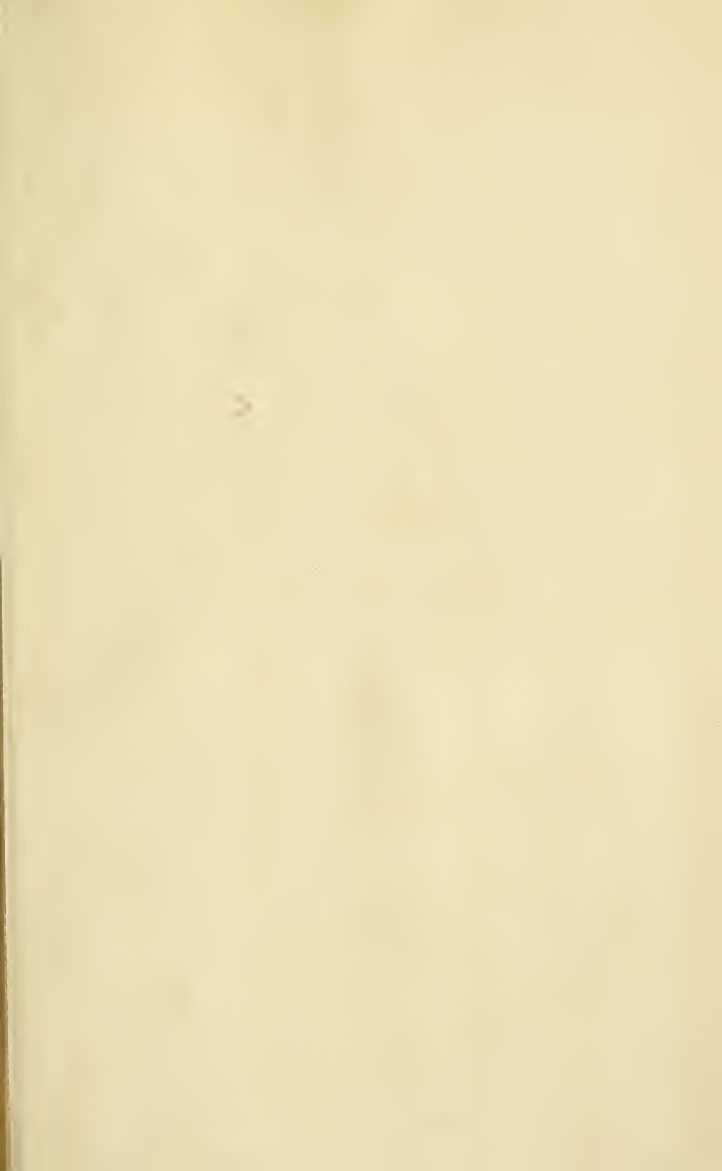
* Thus a person of 30 may secure £1,000 at death by a yearly payment, *during life*, of £20. 15s. This Premium, in any other of the Scottish Mutual Offices, would secure £300 only, instead of £1,000. The without profit rates of other Offices *differ little from these*, so that Assurers with them *virtually throw away the prospect of additions without any compensating advantage*.

Or, if unwilling to burden himself with payments during whole life, he may secure the same £1,000 by *twenty-one* yearly payments of £27. 13s. 4d.—*being thus free of payment after age 50.*

ENDOWMENT ASSURANCES with guaranteed rates of bonus are now issued on very favourable terms, and will be found specially suitable to those requiring the use of the sum assured during advanced age.

Reports, with full information, and Proposal Forms may be had on application to the Midland Branch,
95, Colmore Row, Birmingham

GEO. A. PANTON, Res. Secretary.





SERIAL

P
Med
B
v.35

Birmingham medical review

GERSTS

